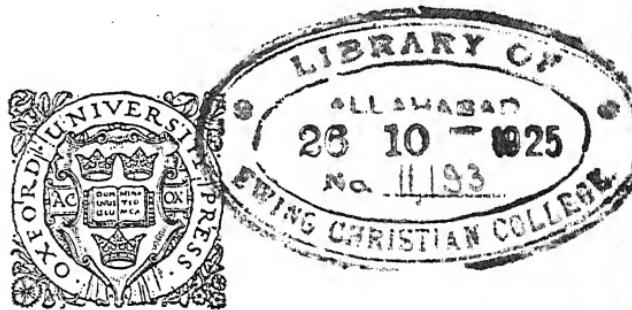


THE INDUSTRIAL EVOLUTION OF INDIA IN RECENT TIMES

BY

D. R. GADGIL

B.A., M. LITT. (CANTAB.)



HUMPHREY MILFORD
OXFORD UNIVERSITY PRESS
LONDON BOMBAY CALCUTTA
MADRAS
1924

PRINTED IN INDIA
BY GEORGE KENNETH AT THE DIOCESAN PRESS,
VEPERY, MADRAS—1924. C4953

PREFACE

THE work now published was first written as a thesis for the degree of Master of Letters of Cambridge University. It is printed here—except for a few verbal alterations—almost in the same form as the thesis. What has been attempted in the following pages is a sketch of the economic history of India from the fifties of the last century to the beginning of the War in 1914. I have not brought this sketch up to date mainly because of the fact that the shock imparted by the War to the economic equilibrium of the world has been very great; and the conditions obtaining even to-day are not normal enough to enable us to measure accurately the effects of the events of the last decade.

The subject is a wide one; and yet the only dramatic event in this economic transition is, perhaps, the decline of the old handicrafts. The collapse of these was indeed sudden and complete. In other respects the events move on with a slow pace and a dull monotony. The most considerable change has been in the scope and methods of commerce—a change brought about by the great development of the methods of transport, especially since the fifties of the last century. This great development of transport facilities during the latter half of the nineteenth century has, indeed, been put forward as a reason for the slow and one-sided progress of the industrial evolution in India. It might well be argued that a less rapid spread of the means of communication might have given a breathing-space to the old handicrafts in which to readjust their organization and

their methods to the new conditions. On the other hand, it might be said that this would have meant only stagnation. In the domain of agriculture the most considerable change has been the commercialization of agriculture. But the really serious aspect of the question is the problem of population. The burden on land seems, if anything, to be increasing, as is evidenced by the steady proportion of the food-grain area in the total area cultivated, in spite of the rapid increase, during the last few decades, in the area of land under the plough. This fact also saliently brings out the close connection between agricultural and industrial prosperity, and the necessity of a greater impetus to the growth of industries for relieving the pressure on land. The chief progress in the industries was made by two factory industries and one plantation industry. Otherwise the progress is small, disconnected and decidedly one-sided. It must be here pointed out that we have no reason to believe that the economic conditions obtaining in India are very different from those which obtained in the West in former times. I have tried to show, especially in the remarks about the scarcity of factory labour and in the chapter on the organization of urban industries, that the lines of evolution have been the same as have been noticed in most countries of the West. The future is not so rosy as one would like to believe. A sudden growth of industries, such as took place in many European countries during the nineteenth century, seems improbable. The progress will be slow. No big industries requiring complicated machinery or a thorough use of by-products are likely to spring up. The chief direction of the progress will be that of the accessory industries and industries chiefly connected with agricultural operations.

or with the further working up of raw agricultural produce grown in the country.

The subject I have chosen is a very wide and a difficult one and I found it impossible to treat it with any fulness within the space usually permitted for a thesis. Consequently, I have had to omit many important aspects, e.g., the growth of banking, from consideration, and also to be satisfied with a mere mention of many other questions. I have attempted to sketch briefly the course of recent economic history, and to estimate the nature and extent of the changes in organization of Indian agriculture and industry. I can lay no claim to any novel views or even originality of treatment. My only excuse for embarking upon such a difficult task is the almost entire absence of any works on the recent economic history of India; and I shall feel amply repaid if this work induces some abler student to take up this neglected but all-important question.

I cannot fully express in words what I owe to Mr. H. D. Henderson of Clare College, Cambridge. It was entirely owing to his kind encouragement that I undertook the work, and his criticism and suggestions have always been of the greatest value. I have likewise to thank Mr. W. S. Thatcher of Fitzwilliam Hall for some valuable suggestions. My thanks are also due to my friend, Mr. J. V. Joshi, for his help with regard to the publication of this work.

D. R. GADGIL

SITABURDI,
NAGPUR,
March 1924.



CONTENTS

CHAP.		PAGE
I.	INTRODUCTORY ...	1
II.	THE AGRICULTURIST (1860-80)	14
III.	THE DECLINE OF HANDICRAFTS	36
IV.	BEGINNINGS OF MODERN INDUSTRY	52
V.	THE AGRICULTURIST (1880-95)	68
VI.	GROWTH OF INDUSTRY (1880-95)	83
VII.	THE AGRICULTURIST (1895-1914)	99
VIII.	INDUSTRIAL PROGRESS (1895-1914)	117
IX.	RAILWAYS AND IRRIGATION ...	145
X.	GROWTH OF TOWNS ...	158
XI.	THE TRANSITION IN AGRICULTURE	174
XII.	THE COUNTRY ARTISAN ...	187
XIII.	ORGANIZATION OF URBAN INDUSTRY	204
XIV.	CONCLUSION ...	215
	APPENDIX A ...	229
	APPENDIX B ...	231
	INDEX ...	233

BIBLIOGRAPHY

ANNUAL NOTE ON THE CULTIVATION OF COFFEE (from 1896 onwards).

ANNUAL NOTE ON THE CULTIVATION OF TEA (from 1895 onwards).

BADEN-POWELL, B. H.: A Short Account of Land Revenue, etc. in India (1913).

— Indian Village Community (1896).

BALL, SIR V.: Economic Geology of India (1881).

BENGAL INDIGO COMMISSION: Report (1860).

BHATVADEKAR, SIR B. K.: Overcrowding in Bombay and the Problem of Housing (1904).

BIRDWOOD, SIR G.: Industrial Arts of India (1880).

BOMBAY AND LANCASHIRE COTTON SPINNING ENQUIRY (MANCHESTER CHAMBER OF COMMERCE): Report (1888).

BOMBAY FACTORY COMMISSION: Report and Evidence (1885).

BRIGGS, J.: Cotton Trade of India (1840).

— Europe and India Compared (1857).

BUCHER, C.: Industrial Evolution, translated by S. M. Wickett (1901).

BUCKLEY, R. B.: Irrigation Works of India (1905).

BULLETINS OF INDIAN INDUSTRIES AND LABOUR, Nos. 1, 5, 8, 16, 18.

CAIRD, SIR J.: India, the Land and the People (1884).

— Report on the Condition of India (1879) *[P. P.]

CASSELS, W. R.: Cotton in the Bombay Presidency (1861).

CENSUS: Reports and Tables. Imperial and Provincial (1872, 1881, 1891, 1901, 1911).

CEYLON LABOUR COMMISSION: Report (1908).

CHAPMAN, J.: Cotton and Commerce of India (1851).

CHATTERJEE, A. C.: Notes on Industries in the United Provinces (1908).

*[P. P.] denotes Parliamentary Paper.

- CHATTERTON, SIR A.: Agricultural and Industrial Problems in India (1903).
- Industrial Evolution in India (1912).
- CLARK, W. A. G.: Cotton Fabrics in British India and the Philippines (1907).
- CLAYTON, H.: Rural Development in Burma (1911).
- COATES, W. H.: Old Country Trade of the East Indies (1911).
- COLLIN, E. W.: Report on the Existing Arts and Industries in Bengal (1890).
- COMMISSION APPOINTED TO ENQUIRE INTO THE WORKING OF THE DECCAN AGRICULTURISTS' RELIEF ACT: Report (1891-92).
- COMMITTEE ON THE ESTABLISHMENT OF CO-OPERATIVE CREDIT SOCIETIES IN INDIA: Report (1901).
- COMMITTEE ON INDIAN RAILWAY FINANCE AND ADMINISTRATION: Report (1907).
- COMMITTEE ON RAILWAYS IN INDIA: Report (1884).
- COMMITTEE ON THE RIOTS IN THE DECCAN: Report, Appendices, etc., (1875).
- CONNEL, A. K.: The Economic Revolution of India and the Public Works Policy (1883).
- COOMARSWAMI, A.: Art and Swadeshi (1905).
- The Indian Craftsman (1909).
- Medieval Sinhalese Art (1908).
- COTTON CULTIVATION IN INDIA: Correspondence, etc., (1863) *[P.P.]
- COTTON IMPROVEMENT IN INDIA: Correspondence, etc., (1904) *[P.P.]
- COTTON IMPROVEMENT IN INDIA: Correspondence, etc., (1906) *[P.P.]
- CROOKE, W.: The North-West Provinces of India (1897).
- CUMMING, J. G.: Review of the Industrial Position and Prospects of Bengal in 1908 (1908).
- DATTA, K. L.: Report on the Enquiry into the Rise of Prices in India (1914).
- DECCAN AGRICULTURISTS' RELIEF ACT: Papers relating to (1875-96). 2 Vols.

*[P. P.] denotes Parliamentary Paper.

DIGBY, W.: The Famine Campaign in South India (1876-78).

DOWDING, C.: Tea Garden Coolies in Assam (1894).

DUTT, R. C.: India in the Victorian Age (1906).

— Land Problems in India (1904).

EAST INDIA (SUGAR) COUNTERVAILING DUTIES: Correspondence and Act (1899) *[P. P.]

EDWARDES, S. M.: Rise of Bombay (1902).

EMPLOYMENT OF WOMEN AND CHILDREN IN MINES: Correspondence, etc. (1893) *[P. P.]

EWBANK: Indian Co-operative Studies, edited by (1920).

FACTORY INSPECTION AND PAPERS RELATING TO FACTORY INSPECTORS' REPORT FOR THE YEAR 1892 (1894) *[P. P.]

FAMINE AND RELIEF OPERATIONS IN INDIA: Papers relating to 1899-1900 (1900) *[P. P.]

FAMINE, ETC.: Papers relating to 1900-02 (1902) *[P. P.]

FOLEY, B.: Report on Labour in Bengal (1906).

FRASER (LOVAT): India Under Curzon and After (1911).

— Iron and Steel in India (1919).

GANGOLY, N. N.: Grievances of the Tenantry in the Province of Agra (1915).

GEOGHAGEN, J.: Note on Emigration from India (1874).

— Report on Silk in India (1874).

GHOSH, H. H.: Advancement of Industry (1910).

GRANT-DUFF, J. C.: History of the Mahrattas, edited by Edwardes (1921).

GRIERSON, G. A.: Behar Peasant Life (1885).

GUPTA, G. N.: The Industries and Resources of E. Bengal and Assam (1908).

HADI, S. M.: Sugar Industry of N. W. Provinces and Oudh (1899).

HAMILTON, C. J.: The Trade Relations Between England and India (1919).

HAVELL, E. B.: Essays on Indian Art, Industry, etc.

— The Basis for an Artistic and Industrial Revival in India (1912).

— Handbook of Indian Art (1920).

*[P. P.] denotes Parliamentary Paper.

- HENVEY, F.: Narrative of the Drought and Famine in N. W. Provinces 1868, 69, 70 (1870).
- HISTORY OF INDIAN RAILWAYS UP TO 1918 (1919).
- HOEY, W.: A Monograph on the Trade and Manufactures of Northern India (1880).
- HOLDERNESSE, T. W.: Narrative of the Famine in India 1896-97 (1897).
- HOLLAND, SIR T.: Sketch of the Mineral Resources of India (1908).
- HOPE, E. R.: Life of Sir Arthur Cotton (1900).
- HOWARD, A. & G. L. C.: Wheat in India (1909).
- HUNTER, SIR W. W.: The Marquess of Dalhousie (1890).
- IMPERIAL GAZETTEER OF INDIA (1908).
- IMPERIAL INSTITUTE: Indian Trade Enquiry (1916-22), Reports on.
- TIMBER AND PAPER MATERIALS: RICE; HIDES AND SKINS; JUTE AND SILK; OIL-SEEDS; LAC; TURPENTINE AND ROSIN.
- INDIAN INDUSTRIAL CONFERENCES: Papers read before.
- INDIAN FACTORY ACT: Reports on the Working of (1889) * [P. P.]
- INDIAN FACTORY COMMISSION: Report, etc. (1891).
- INDIAN FACTORY LABOUR COMMISSION: Report, Minutes of Evidence, etc. (1908).
- INDIAN INDUSTRIAL COMMISSION (1916-18): Report and Minutes of Evidence.
- INDIAN IRRIGATION COMMISSION: Report, etc. (1904).
- INDIAN FAMINE COMMISSION: Report, Appendices, Minutes of Evidence (1880).
- INDIAN FAMINE COMMISSION: Report, Appendices, Minutes of Evidence (1898).
- INDIAN FAMINE COMMISSION: Report, Appendices, Minutes of Evidence (1901).
- INDUSTRIAL HANDBOOK: Issued by the Indian Munitions Board (1919).
- INTRODUCTION OF IMPROVEMENTS IN INDIAN AGRICULTURE: Reports on, 1909, 1910, 1912, 1914.
- IYER, G. S.: Some Economic Aspects of British Rule in India (1903).

* [P. P.] denotes Parliamentary Paper.

JACK, J. C. : The Economic Life of a Bengal District (1916).

• JENKINS, R. : Report on the Territories of the Raja of Nagpur (1827).

JEVONS, H. S. : Consolidation of Agricultural Holdings in the U.P. (1918).

— The Economics of Tenancy Law and Estate Management (1921).

KALE, V. G. : Gokhale and Economic Reforms (1916).

— Indian Industrial and Economic Problems (1917).

KEATINGE, G. : Rural Economy in the Bombay Deccan (1912).

— Agricultural Progress in Western India (1921).

KERR, H. C. : Report on the Cultivation of, and Trade in, Jute in Bengal (1874).

KEYNES, J. M. : Indian Currency and Finance (1913).

LABOUR ENQUIRY COMMISSION ON COAL AND TEA INDUSTRY : Report (1896).

LAND REVENUE SYSTEM OF BRITISH INDIA : Papers relating to (1902) *[P. P.]

LATIFI, A. : Industrial Punjab (1911).

LAW, SIR E. F. : Minute by (as regards Tariff) (1904) *[P. P.]

LAWRENCE, W. R. : Valley of Kashmir (1895).

LEES-SMITH : India and the Tariff Problem.

LETHBRIDGE, SIR R. : The Indian Offer of Imperial Preference (1913).

LOW, C. E. : Report on the Industrial Survey of the Central Provinces and Berar (1910).

— Hints on the Agricultural Economy of C. P. and Berar (1914).

✓ MACKENNA, J. : Agriculture in India (1915).

MANN, H. H. : Land and Labour in a Deccan Village (1917).

— Land and Labour in a Deccan Village, No. 2 (1921).

MEHTA, P. N. : Survey of the Handloom Industry of Bombay Presidency (1909).

*[P. P.] denotes Parliamentary Paper.

MINERAL PRODUCTION OF INDIA : Quinquennial Reviews, 1898-1903, 1904-08, 1909-13.

MOLLISON, J. W.: A Text-book of Indian Agriculture (1901).

MONOGRAPHS ON INDUSTRIES: (Issued by Provincial Governments):—

ASSAM: Cotton Fabrics (1897); Dyes and Dyeing (1896); Gold and Silverwares (1905); Ivory-carving (1909); Silk Cloths (1899).

BENGAL: Carpet Weaving (1907); Cotton Fabrics (1898); Dyes and Dyeing (1896); Gold and Silver (1905); Dyes and Dyeing (1896); Gold and Silver (1905); Ivory-carving (1901); Leather-Iron and Steel (1907); Leather-work (1904); Paper and Papier-maché (1908); Pottery and Glassware (1895); Silk Fabrics (1903); Stone-carving (1906); Wire and Tinsel (1910); Wood-carving (1903); Woollen Fabrics (1899).

BOMBAY: Cotton Fabrics (1896); Dyes and Dyeing (1896); Gold and Silver (1904); Leather Industry (1910); Paper-making (1908); Pottery and Glass (1895); Silk Fabrics (1896); Stone-carving (1906); Tanning and Working in Leather (1903); Wire and Tinsel (1909); Wood-carving (1902); Woollen Fabrics (1899).

BURMA: Cotton Fabrics (1897); Iron and Steel (1907); Ivory-carving (1901); Pottery and Glassware (1894-95); Silk (1901); Silver-work (1902); Tanning and Leather (1904); Wood-carving (1903).

C. P. AND BERAR: Carpet-weaving (1907); Cotton Fabrics (1898); Dyes and Dyeing (1896); Iron and Steel (1908); Leather-work (1904); Paper-making (1908); Silk Fabrics (1900); Stone-carving (1905); Wire and Tinsel (1910); Wood-carving (1903).

MADRAS: Cotton Fabrics (1907); Ivory-carving (1901); Silk Fabrics (1899); Stone-carving (1906); Tanning and Working in Leather (1904); Wire and Tinsel (1909); Wood-carving (1903).

N. W. P. AND U. P.: Brass and Copperware (1899); Carpet-weaving (1907); Cotton Fabrics (1899); Dyes and Dyeing (1896); Gold and Silverware (1905); Iron and Steel (1907); Ivory-carving (1900); Pottery and Glass (1895); Silk Fabrics (1899);

Stone-carving (1905) ; Tanning and Leather (1903) ; Wire and Tinsel (1909) ; Wood-carving (1903) ; Woollen Fabrics (1898).

PUNJAB : Brass and Copperware (1887) ; Carpet-weaving (1906) ; Cotton Fabrics (1884) ; Fibrous Manufactures (1891) ; Gold and Silver (1890) ; Iron and Steel (1907) ; Ivory-carving (1900) ; Leather Industry (1893) ; Paper-making (1908) ; Pottery and Glass (1892) ; Silk (1887) ; Silk Industry (1899) ; Stone-carving (1905) ; Wire and Tinsel (1909) ; Wood Manufactures (1889) ; Woollen Manufactures (1886).

MORAL AND MATERIAL PROGRESS OF INDIA : Reports (annual and decennial).

MORLAND, W. H. : Agriculture in the United Provinces (1912).

MORRISON, SIR T. : Economic Transition in India (1911).

— Industrial Organization of an Indian Province (1906).

MUKHARJI, T. N. : Art Manufactures of India.

— A Handbook of Indian Products (1883).

NICHOLSON, SIR F. : Report on the Possibility of Introducing Land Banks, etc., in Madras Presidency (1895).

NOEL-PATON, F. : Burma Rice (1912).

— Indian Cotton Seed, Its Industrial Possibilities (1908).

— Indian Wheat and Grain Elevators (1913).

— Sugar in India (1911).

NOETLING, F. : Petroleum Industry in Upper Burma (1892).

NOTE ON LAND TRANSFER AND AGRICULTURAL IN-DEBTEDNESS IN INDIA (1895).

O'CONNOR, J. E. : Report on the Production of Tobacco in India (1874).

ORR, J. P. : Social Reform and Slum Reform (1917).

PASCOE, E. H. : The Oil-fields of Burma (1912).

PEARSON, R. : Commercial Guide to the Forest Economic Products of India (1912).

PEPPER, C. M. : Report on Trade Conditions in India (1907).

PRICES AND WAGES IN INDIA : (Annual).

PUBLIC WORKS COMMISSIONERS, MADRAS: Reports (1852).

RAGHAVAIYANGAR, S.S. : Memorandum on Forty Years' Progress in Madras Presidency (1893).

RANADE, M. G. : Essays in Indian Economics (1898).

REVIEW OF THE TRADE OF INDIA : (Annual).

RIBBENTHROP, R. : Forestry in British India (1900).

RIVETT-CARNAC, H. : Reports of the Cotton Commissioner for C.P. and Berar for the years 1867-68 and 1868-69.

ROBERTSON, T. : Report on the Administration and Working of Indian Railways (1903).

ROGERS, A. : The Land Revenue of Bombay (1892).

ROYAL COMMISSION ON ADMINISTRATION OF EXPENDITURE (WELBY COMMISSION) 1896-1900 : Report and Minutes of Evidence.

ROYAL COMMISSION UPON DECENTRALIZATION IN INDIA : Report, etc. (1908).

ROYLE, J. F. : Arts and Manufactures of India (1852).

— Culture and Commerce of Cotton in India (1851).

SCHLICH, SIR W. : Forest Policy in the British Empire (1922).

SCHMIDT, A. : Cotton Growing in India (1912).

SELECT COMMITTEE ON EAST INDIA FINANCE (1871-74) : Reports, etc.

SELECT COMMITTEE ON PUBLIC WORKS : Report, Evidence (1879).

SHIRRAS, G. FINDLAY : Indian Finance and Banking (1920).

SIMPSON, R. R. : Coalfields of India by V. Ball, revised by (1913).

SLATER, G. : Some South Indian Villages (1918).

SLEEMAN, SIR W. H. : Rambles and Recollections, edited by V. A. Smith (1893).

SMITH, R. BAIRD : Report on the Famine of 1860-61 in N. W. Provinces and Punjab.

STRACHEY, J. & R. : The Finance and Public Works of India (1882).

TARIFF ACT OF 1875 : Correspondence relating to (1876).
*[P. P.]

*[P. P.] denotes Parliamentary Paper.

TARIFF AND COTTON DUTIES : Papers relating to (1878)
* [P. P.]

TARIFF ACT : Papers relating to (1894) * [P. P.]

TEA : Papers relating to the Industry in Bengal (1874).

TEXTILE FACTORIES LABOUR COMMITTEE : Report (1907).

VOELCKLER, J. A. : Report on the Improvement of Indian Agriculture (1893).

WACHA, SIR D. E. : A Financial Chapter in the History of Bombay (1910).

— Life of J. N. Tata (1915).

WALLACE, R. : India in 1887 (1888).

WATSON, J. F. : The Industrial Survey of India (1872).

— The Textile Manufactures and the Costumes of the People of India (1867).

WATT, SIR G. : Commercial Products of India (1908).

— Dictionary of the Economic Products of India.

— Indian Art at Delhi (1903).

— Memorandum on the Resources of British India (1895).

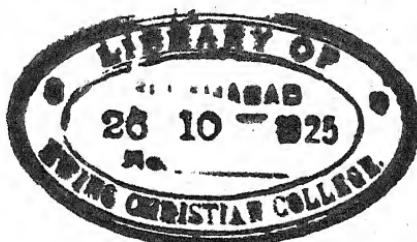
WATTAL, P. K. : Population Problem in India.

WEBER, A. F. : Growth of Cities in the 19th Century (1899).

WILSON, M. : History of Behar (1908).

WOLFF, H. W. : Co-operation in India (1919).

*[P. P.] denotes Parliamentary Paper.



TH

CORRIGENDA

page 62 : *omit* foot-note 1

page 137 (table), column 2, against Cotton: *for* 557,589
read 308,190

THE INDUSTRIAL EVOLUTION OF INDIA IN RECENT TIMES

CHAPTER I

INTRODUCTORY

THE enormous revolution in the methods of transport, brought about during the nineteenth century, has converted the whole world into one market, and thus brought about a state of things, in which the old economic units have been superseded. The forces making for a change in the economic conditions now work over whole continents. The latest phase of economic transition in the world's history has been marked by the one remarkable fact, that this change which was originally brought about in one part of the world has radically affected the structure of economic society in almost all others. India has been no exception to this rule. She began to feel the impact of these forces quite early, and a change of some magnitude has been going on in her economic structure during the last century. But the exact period when the forces working towards this change began to operate is very difficult to determine. In the history of no country is it easy to separate two periods by a clearly defined line ; this is, perhaps, more true of India than of almost any other country.

One of the first causes, operating towards an economic transition, was perhaps the establishment of British rule in India, and this also synchronized with the beginning of the competition of British manufactures with Indian industry. But the establishment of British rule itself was a slow and a lengthy process. For though Bengal was acquired at the time of Clive, Upper Burma was annexed only under the Viceroyalty of Lord Dufferin —a period of more than 100 years. Another important

factor was the introduction of a new revenue system—or rather systems, for they differed widely over different provinces—by the British, and also the introduction of a new system of judicial administration. All these changes in administration began to be introduced towards the beginning of the nineteenth century, but had not taken full effect even by 1850. These changes were slowly operating on the old Indian economic structure, but their total effect was by no means large. The main and the really important factor, which brought about this economic transition, was the opening up of India by means of roads, railways and the new steamship routes. It is this which brought the Indian markets and the Indian supplies of raw materials closer to the West, and thus caused a direct impact of Western methods of production and exchange on Indian industry and trade and that really affected the organization of Indian industrial society.

To get an adequate idea of the effect of this contact, it is necessary to see what was the constitution of the old Indian economic structure. India is, and has always been, pre-eminently an agricultural country. The first fairly reliable census for the whole of India was taken in 1872. This gives under the classification of the adult male population 56.2 per cent as engaged in agriculture, to which must be added the 12.3 per cent classified as general labourers, giving altogether 68.5 per cent of the adult male population deriving their livelihood from land.¹ There is no reason to believe that the percentage of persons employed in agricultural pursuits was ever much less. But even these figures are not enough to emphasize the overwhelming importance of agriculture in India, for most of the rural population, even though engaged in an industrial occupation, had agriculture as a subsidiary occupation. The really important unit, then, was the village in India. This unit differed in size from one part of India to the other. In the plains, the average village was of a considerable size, corresponding to what would be described as a 'township' in England; while in the

¹ This estimate even is too low as subsequent censuses prove.

hilly and the barren tracts it was much smaller, being properly described only as a 'hamlet' or even scattered homesteads. The peasantry also formed the overwhelming majority of the total Indian population. The economic condition of the peasantry, on account of the differences in political conditions, was not the same in all parts of India at the beginning of the nineteenth century. In the Bombay Deccan the ordinary peasant was quite as well off as his contemporary in England;¹ while in many other parts of India, on account of the depredations of the bands of robbers and the general unsettled condition of the country, his condition was the worst possible. But generally speaking, the condition of the peasants may be described as depressed during this period. The Permanent Settlement of Bengal had failed to protect the small peasant from the exactions of the Zemindars, and in most other parts the initial assessments of the land revenue, levied by the British, were very heavy.² They weighed very heavily, for example, on the once prosperous tract of the Bombay Deccan after the British acquired it in 1818.³ In this tract they were considerably eased in 1836, but it took the peasantry nearly 25 years to recover from the crushing effect of the initial assessments. In the Madras Presidency also, the state of the peasantry was far from prosperous, chiefly on account of the very exorbitant land revenue demands.⁴ The Government had to reduce the assessments later on, on account of the deplorable condition of the cultivators, and this with other causes tended to improve the condition of the people.⁵

¹ G. Keatinge, *Rural Economy in the Bombay Deccan*, chap. i, 1912. The remarks are specially applicable to the Deccan before the march of the Holkar in 1802 and the famine that followed.

² R. C. Dutt, *India in the Victorian Age*, Part I.

³ Report of the Committee on the Riots in Poona and Ahmednagar (1875). Chap. ii.

⁴ S. S. Raghavaiyangar, *Memorandum on the Progress of the Madras Presidency during the Last 40 Years* (1893). Sec. iii.

⁵ Col. R. Baird Smith describes the state of the peasantry in the N.-W. Provinces in 1837 as 'debilitated by a fiscal system

In the first half of the nineteenth century, the state of internal communication in India was extremely defective. In most parts of the country, roads as such did not exist, and where they did exist their condition was very unsatisfactory. The Indus and the Ganges, with their tributaries, were the only river systems that were navigable to any large extent. With the help of these navigable rivers and a few 'made roads,' the state of communications in North India was not so utterly bad as in the south. Some idea of the conditions in the south will be gained from the report of the Public Works Commissioners, appointed by the Madras Government. They report that, at the beginning of the century, there was an almost complete absence of any roads in the Presidency. Some attempts had been made by the East India Company to improve this state of affairs, but they were very meagre as compared with the area of the Presidency. The following description by the Commissioners of the best kind of road is very illuminating. They write '... nearly the whole of the made roads (so called) are only so far made as to be just practicable for carts. They admit of carts moving in dry weather with light loads at a very slow pace and by very short stages. But by far the greater portion of these roads are unbridged and a heavy shower cuts off the communications wherever the stream crosses a line; and they are in many cases so unfit to stand the effects of the wheels while the surface is wet, that in monsoon months they are out of use except for cattle or foot passengers.'¹ It is not surprising, then to find that the rates for carriage of any agricultural produce were exorbitant, and that naturally there was very little trade.

that was oppressive and depressing in its influence, and with its agricultural population discontented under the extreme confusion into which, by the action of the revenue and judicial systems, their most treasured rights had been thrown.' (P. 21, *Report of the Famine, etc., 1860-61.*)

¹ *First Report of the Public Works Commissioners.* Madras. (1852). There were only 3,110 $\frac{1}{4}$ miles of even these made roads in Madras Presidency in 1846.

in existence then. On account of the bad state of the roads, the carts used in many parts of the country were of a primitive type. A curious proof of this effect of the state of roads on the character of the carts used is afforded by the fact that, in the Central Provinces, when the roads were greatly improved in 1860-65, a superior kind of cart at once came into use.¹ The effect of this lack of communications on the volume of the export trade of a country is obviously important; but its effect on the internal trade is even more so. It made the carriage of bulky and cheap goods almost impossible, and generally speaking, restricted the trade to the comparatively light and valuable products.² But, even in these, the trade was not very large. Dr. Birdwood remarks in his report on the Central Museum in 1863, 'Koftgaree and the exquisite soap-stone ware of Agra were not known in Bombay until sent to the Museum by the Lieutenant-Governor of Punjab.'³ This is surprising, seeing that, under Maratha rule, there was a brisk trade between the Deccan and North India. But there is no doubt that, at any rate, a good many of the art products of the north were unknown in the south. The consequence of this was naturally 'an extremely limited market even for the best and most characteristic native products.'⁴ Thus, during the first half of the nineteenth century, the trade of India was restricted, within very small bounds, as regards the kind of goods, and also as regards the distance traversed.

¹ Evidence of Mr. Nicholls before the Indian Famine Commission, 1880. (Section on agricultural improvement). See also Sec. iii of the above.

² In North India the conditions were better and along the rivers quite a considerable trade even in bulky products was carried on. This was also the case in some parts of Central India. Mirzapore, for example, carried on a flourishing trade in cotton with Nagpore and Berar. But most of this was carried on bullocks and not in carts. See J. F. Royle, *Culture and Commerce of Cotton in India* (1851). Pp. 50-60. Also J. Briggs, *Cotton Trade of India* (1840). Pp. 82-83.

³ Quoted in the *Plan for an Industrial Survey of India* by Dr. J. F. Watson, 1872, p. 5, footnote.

⁴ *Ibid.* p. 5.

The internal trade of the country being in such a state, the prices in one part of the country had no relation whatever with prices in any other part. It also follows that, the unit of easy trading being so narrowed down, the fluctuations in prices—especially of food grains—were sudden and violent. India is a country where the prices of food grains, in any particular year, had always been solely dependent on the nature of the monsoon that year. When, as was the case before the construction of roads and railways, there were no large districts to draw upon for supply in case of a local failure of crops, the variations in prices were immense. To take a few examples.¹ Bajra at Kaira (Gujarat) was selling in 1812 at $7\frac{1}{2}$ seers per rupee, while by 1815 it had fallen to 31 seers; rice at Salem (Madras) was selling at 75 seers per rupee in 1832, but in 1833 it was as high as $33\frac{1}{2}$ seers; also jowar at Dhulia (Khandesh) fell from 19 seers in 1846 to $85\frac{1}{2}$ seers in 1848. Of course these violent fluctuations in different parts of the country had no co-relation whatever between them. There was a terrible famine in the Deccan and also in Rajputana in 1802–04, but the price of bajra in Gujarat did not rise higher than 27 seers to the rupee. But an even more striking instance is that, in the terrible famine in the N. W. Provinces in 1833, the price of wheat at Agra ruled at $13\frac{1}{2}$ seers per rupee, but this had no effect on the Khandesh prices, where there was plenty in that year and wheat was selling as low as 61 seers to the rupee. In such conditions, what would now be considered merely as a local scarcity, became a famine, and the mortality on account of these famines was sometimes terrible.²

¹ Taken from Memorandum on Prices by Mr. Pedder in the *Moral and Material Progress Report* for the year 1882–83.

² Major-General Briggs in his evidence before the Parliamentary Select Committee said 'In 1823 grain in Khandeish had fallen from 6s. to 8s. a quarter. At Aurangabad it was 34s. a quarter and at Poona as high as 64s. to 70s. a quarter; but in consequence of a monsoon and the want of roads the grain from Khandeish could not reach Poona.' Quoted in W. R. Cassel's *Cotton in the Bombay Presidency* (1861). P. 297.

The agricultural population of India was by far the most predominant, but the industrial population was also largely distributed in the villages. The predominance of agricultural economy meant that the proportion of the urban population in India at this time was small. The urban population could not have amounted to more than 10 per cent of the total population, and even many of the so-called towns were merely overgrown villages.¹ Most of the towns in India owed their existence to either of the three following reasons: (i) They were places of pilgrimage or sacred places of some sort; or (ii) they were the seat of a court, the capital of a province; or (iii) they were commercial depots, owing their importance to their peculiar position along trade routes. Of these reasons, the first two were by far the most important. Striking examples of the first class of towns were Benares, Allahabad, Puri, Gaya, etc. These, as long as the religion on account of which they attained importance was widely prevalent, enjoyed a period of almost uninterrupted prosperity. But, as in the case of Bodh Gaya, the disappearance of the religion connected with the place meant also the decline in its importance. But the large majority of these places of pilgrimage were Hindooistic, and the most important of these had enjoyed an almost continual prosperity, till the nineteenth century, for a period of many centuries. But this class of towns was naturally restricted in number and, of course, did not admit of an indefinite increase.

But the group of towns, which originated in the establishment of a court, was by far the most important and most numerous of the whole; the court might be an imperial court, or it might consist only of the retinue of a petty chieftain controlling a small province, but in either case the nature of the town was

¹ This is a mere conjecture in the absence of any statistics. The figure is given on the supposition that the proportion did not differ widely from that in 1872. For though there were remarkable instances of decay since the beginning of the century, e.g. Murshidabad, there was a counter-balancing growth, e.g. in Bombay, Calcutta, Cawnpore, etc.

uniform.¹ The one remarkable characteristic of all these towns was their liability to crumble down rapidly as soon as the prop of the court was withdrawn. One may illustrate this by examples from the small tract of the Deccan. The old capitals like Paithan and Devgiri became unimportant and decayed as soon as the Hindus lost their power. Then followed the Mohammedan dynasties of Ahmednagar, Bijapur and Golconda. Bijapur, at the height of its prosperity, was reckoned to be second to no city in India, but, with the fall of the Adilshahi dynasty, all its old glory suddenly vanished and only the monuments remained. Indeed all the characteristics of urban life in India were determined by this factor of the influence of the courts. The urban life depended entirely on the nobles and their retinue; and the town was often merely a semi-permanent camp.

The last class of towns was the trading or the commercial towns. These towns owed their importance to their peculiar position along trade routes. Mirzapur is a very good example of this class. It depended for its prosperity on its trade with Central India and Bengal. It was a very important post on this trade route, owing to the fact that it was the highest navigable point on the Ganges. Therefore a very great proportion of the cotton export of Central India passed through this point. But this class was certainly not a numerous one;² the internal trade of India during this period was not very large, and therefore the importance of this class was restricted. But the commercial towns were certainly a little more stable than those which depended on being seats of courts.

From an economic point of view, the dominant trait of Indian towns was their non-industrial character. By this

¹ W. H. Sleeman, *Rambles and Recollections*. Edited by V. A. Smith (1893). Vol. ii, chap. viii.

² For example of towns of over 20,000 inhabitants in the North-West Provinces in 1891 only six owed their origin to trade and of these many, like Cawnpore, had attained importance in very modern times. See *Report of the Census of North-West Provinces* (1891).

is not meant that the Indian towns at this time had no industries, but rather that the industries were not the cause of their importance. There were certain industries always in every town; these depended on its nature. In Benares, a place of pilgrimage, we find the importance of brass and copperware and bell-metal industries; the wares turned out were largely sacred vessels (for holding Ganges water, etc.) and utensils used in worship, etc. In all towns depending for their prosperity on courts, we find that the luxury industries predominate; and, as this was the most important class of towns, the nature of urban industry was thereby determined. Thus the wire and tinsel industry, the weaving of fine textiles of all kinds, embroidery, fine gold and silver work, stone, ivory and wood carving and many other artistic handicrafts reached a high stage of excellence in the Indian towns; but the staple products, necessary for the common people, were all produced in the villages. The towns had only one kind of industry, the art and the luxury industry; and these depended for their continued prosperity, essentially, on the demand of the nobles and the court. The existence of the court was essential for the industry. The urban industry could not exist independently of the courts. Thus it was that, with the withdrawal of the court, the whole economic structure of urban life collapsed. Two examples of such a collapse during the nineteenth century might be cited. The first is Lucknow, the capital of the Nawabs of Oudh. The province was annexed in 1858, and the court of the Nawab naturally disappeared. Mr. Hoey describes the effects thus, 'It is believed that, for a few years after the Mutiny, the population of Lucknow suffered a sudden decrease. All persons, connected with other parts of the province and of India generally, whom accidents of service had brought to Lucknow, left it. That section of the population, who were attached to the city by the special conditions of trade under native rule, also left.'

¹ W. Hoey, *A Monograph on the Trade and Manufactures of Northern India* (1880). Part II, p. 29.

The second example is Tanjore. The following extract is taken from the Madras Census Report of 1891. 'There can be little doubt that it (Tanjore) has declined since the death of the last Rajah in 1855. The existence of a court, *even though a titular one*,¹ exerts a considerable influence upon the population of the town in which it is held, as it attracts numbers of all kinds of professions, and in India a still larger number of Brahmins.'

All the characteristics, above described, of the Indian economic conditions during the earlier half of the nineteenth century, were also found in most countries during their corresponding stage of industrial development. But there was one feature of the village community in India, which has no close parallel anywhere else. The institution of the village community, no doubt, is one which was once common almost all over Europe and Asia. The form which it took in India was peculiar—being found all over the country except in the eastern portion of Bengal and in Assam. Inasmuch as nearly 90 percent of the population lived in villages the constitution of the village was the most important factor in India's social structure. The village community has affected the development of India in various ways. For example, it was perhaps this peculiarly self-sufficient structure of the village that preserved the civilization of India through the many invasions and the many changes of rulers and governments.² But we are concerned here with pointing out its salient points in connection with the economic structure.

The Indian village on account of the difficulty of communicating with the outside world was, of course, an almost entirely self-sufficient unit. All the main needs of the community were satisfied locally. It was only for such things as salt that recourse was had to an outside

¹ Italics mine.

² 'These communities contain in miniature all the materials of a State within themselves and are almost sufficient to protect their members if all other government were withdrawn.' Elphinstone's Report on the Deccan, etc., quoted by R. C. Dutt in *India in the Victorian Age*.

market, and in the case of small villages such luxuries as ornaments could not be procured in the village itself. The following description of the typical village will bring this out. ' . . . Such industries as are necessary to supply the simple needs of the village are prosecuted in the village itself. The Punjab village is eminently self-sustaining, it grows its own food, it makes its own implements, moulds its own domestic vessels, its priests live within its walls, it does without a doctor, and looks to the outside world for little more than its salt, its spices, the fine cloth for its holiday clothes, and the coin in which it pays its revenue.'¹ What is said here of the Punjab village applies with equal force to the villages all over India. It must be noticed that, at the beginning of the nineteenth century, when cash payments of revenue were almost unknown, the village was even more isolated than it is shown to be in the above picture.

The mere fact of the isolation of the village is not striking in itself, nor was the fact that all the artisans lived in the village peculiar. But the peculiar feature of the Indian village community was that the majority of the artisans were servants of the village. These different artisans had usually their own plots of land, which they held from the village rent free, or at a reduced rental; and one of the chief sources of income of these artisans consisted in the fixed share of each year's produce, paid to them by each cultivator. For this they were required to render certain services to the body of the cultivators.² Thus a carpenter was required to repair all agricultural implements and make most of them for each cultivator without any further payment. It was only for such things as the sugar-press or the cart, that he was paid anything extra. The dues and the duties of this village servant class of artisans differed from one

¹ *Report of the Census of the Punjab, 1881*, by Denzil Ibbetson, p. 18.

² This was the arrangement in cases where the village was a group of independent cultivators. The slight modification which was found in the case of landlord villages will be noticed later.

part of the country to another.¹ But, though these differed, the remarkable feature of the artisans being village servants was to be found everywhere. Not all the village servants were artisans; for this group also included in many parts the headman, the priest, the accountant, etc. Neither were all artisans village servants. For example, the weaver was nowhere a village servant. But artisans whose services would be regularly required by all members of the village community, generally, formed the artisan group of the village servants.

This system gave a peculiarly compact form to the Indian village community and for that very reason it was well able to resist outside attacks. The office of the village artisan being hereditary, it stereotyped the whole life of the village. It was no doubt a very good device for insuring that the services required for the village would be regularly provided for, especially during troublous times but, at the same time, it insured against progress in the methods of the artisans. To begin with the artisan, who did all the miscellaneous duties connected with his occupation in the village, did not specialize, and the division of labour was extremely limited. The proficiency, therefore, of the artisan in his craft could not be expected to be great.² It also effectively protected

¹ The differences were not only in the dues and services but also in the artisans who were servants of the village. For an artisan who would be a village servant in one part of the country would be an independent artisan in another part. For the different parts, see W. Crooke, *North-West Provinces*; Sleeman, *Rambles and Recollections*, vol. i, pp. 73-74; Grant-Duff, *History of the Mahrattas* (Edited by S. M. Edwardes), vol. i.

In the south the arrangement was a little peculiar, for in the group of 'Panchalas', i.e. the five smiths, the artisans followed any profession within the group they pleased (See *Report of the Mysore Census, 1891*); such interchangeability was not to be found in the north.

² See J. Chapman, *The Cotton and Commerce of India* (1851). Sometimes the methods were very bad and this fact helped in some parts, when the communications grew, to break down the system. Of Chhattisgarh carpenters we read, 'The implements used are so rough that the cultivators generally prepare their own or if pushed make for the nearest town.' *Report of the C.P. Census, 1891.*

the artisan from the pressure of external competition. For a cultivator was not likely to buy his pots from an outside potter—even though his wares were superior—if he had been paying the village potter to supply them to him. This same absence of external competition resulted in an entire absence of localization of industry in India. Indeed, except in the artistic wares—which were produced in the towns—there was no localization of industry in India.¹ The lack of communications alone does not account for this, for, in Burma, where the difficulties of transport were also great, there was localization to a small extent in the areas of small groups of adjacent villages.² But in India even this was almost entirely non-existent. Thus, with very little division of labour, and almost no specialization in products at different places, the state of the Indian rural industry was very backward.

The village community, with its peculiar constitution, was the most interesting and the most important feature of Indian economic life. The towns were not very influential. They were almost as something apart from the general life of the country. Thus India was characterized by an aloofness from the outside world; it consisted of an immense number of entirely self-contained and self-supplying units with little contact with each other and practically no knowledge of the outside world.

¹ A slight exception might be made in the case of weaving. In this in some parts of the country there were centres which were famous in surrounding tracts for their specialized products.

² The contrast here with Russia, with whose village communities the Indian village is often compared, is striking. Mavor mentions whole villages of blacksmiths, wire drawers, etc.; this was impossible in India. He also says 'The products of these village artisans were intended for sale. Specialization of village production rendered this course necessary and the wide market with facilities of trading rendered it possible' (p. 530).

See J. Mavor, *Economic History of Russia*, Vol i, Book III, chap. iii. Such peasant industries did not and could not exist in India.

Also for Burma see Bell, *Monograph on Iron and Steel in Burma* (1907). 'Another development [of the blacksmith's industry] has its development in Mindan village where every household depends more or less on its smithy.'

CHAPTER II

THE AGRICULTURIST 1860-80

THOUGH the contact and commerce of India with the West had been going on for many centuries, this had not affected India's economic structure at all till the nineteenth century. It was only after the series of inventions that led to the application of mechanical power to manufacture on a large scale, that the English industrialist gained a considerable advantage over the Indian artisan. It was at about the same time that England acquired a large portion of India, and that new administrative and judicial systems were introduced into the land. These latter had in many parts the effect of depressing the condition of the people, or of undermining old institutions like the village community as a self-contained administrative unit. But they left the industries and the industrial organization of India much where they were before. The competition of the English industrialist, however, was a more important factor. But even though the foreign manufacturer was able to beat the Indian artisan in this competition, the entire lack of communications in the interior of India sorely handicapped him; and during the first half of the nineteenth century, the only industries that were seriously affected by foreign competition were the Dacca muslin industry, the Bengal silk manufactures industry, and the Bombay and Bengal shipping industry. Even so, there is reason to doubt how far the decline in the first two can be directly attributed to external competition. In the direction of the establishment of new industries and improvement of agriculture, this contact had not as yet borne much fruit.¹ The chief results of this nature, were the

¹ Sericulture was also an industry specially developed by the East India Company. But its development was of a forced nature. During the Napoleonic wars, when the regular supply

spread of the cultivation of jute in Bengal for exportation in about 1830, the beginnings of the export of cotton and some improvement in the methods of its cultivation. The mass of the population, generally speaking, were as yet unaffected. They felt the foreign rule, they felt the heavy assessments, they felt the decay of old institutions, but they did not feel the competition of foreign goods or other external forces effectively enough to induce them to change their industrial methods or organization.

It was not till 1850 that the volume of India's foreign trade began to increase rapidly as the result of the improvement of ocean steamers and the extension of roads in the interior. The fifties saw the beginnings of railway enterprise in India; the latter part of the decade witnessed large accessions to territory directly under British rule, and also the disappearance of the East India Company and the transfer of Indian Government to the Crown. This was an eventful decade indeed, and the changes that were heralded in by so many important events were to be of enormous importance in the economic history of India.

The first event, in the Western world, to act on India suddenly and to have a very important economic effect was the American Civil War. It was now shown for the first time how very near to the markets of the West India had been brought. This also was the first important event to force upon the notice of the cultivator the important fact of the existence of these markets.

The history of cotton cultivation in India is a long one; but, though the cultivation of cotton in India was practised from very early times, the export of raw cotton from India is a comparatively new thing. Before the nineteenth century India was chiefly famous for exporting her elegant fabrics to the most civilized nations in

of raw silk from Italy to England was cut off, this industry was fostered by the Company in Bengal. The artificial nature of the growth is shown by the fact that, as soon as the Company withdrew their active support (in 1836), the industry began at once to decay. (See J. Geoghegan, *Report on Silk in India 1874.*)

the world.¹ The inventions of machinery for spinning and weaving and the consequent competition of cheap goods had considerably diminished the exports of these 'elegant fabrics,' and also at the same time revealed the possibilities of India as a supplier of raw cotton. Though, as late as 1780, America as a producer of raw cotton was quite insignificant, her progress since that date had been remarkable, especially after the discovery of Whitney's new saw-gin; and by 1830 she became the principal supplier of cotton to the growing English industry. At this date India's exports of raw cotton were very small. Dr. Royle writes 'It forms but a small part of the imports into this country (England), but a more conspicuous factor in those of China; the two quantities together, however, make but an insignificant portion of what is produced in the country. For it may be seen cultivated in patches in almost every part of its wide extent, in some provinces forming nearly one-fourth part of the 'Khureep', or wet season crop, and necessarily an important item in the agriculturist's return.'² Until about 1860, these exports, though on the whole slightly increasing, remained curiously fluctuating. But already the British cotton manufacturers had their attention drawn to India as a possible source of supply of the raw material for their industry.³ A failure of the cotton crop in America in 1846 showed to them the instability of this source, and they were busy finding an alternative in case of emergency. Royle, after writing of the old manufactures of India, goes on to say: 'In the present day, however, we often hear of the country talked of only in the light of a cotton farm, whose business it

¹ J. F. Royle, *Culture and Commerce of Cotton in India* (1851). P. 20.

² *Ibid.* p. 18.

³ The growing interest taken in India's cotton supply is shown by the number of books that appeared about this time on the subject. Chapman, the founder of the Great Indian Peninsula Railway, lays great emphasis on this point of making accessible the Indian cotton supply in his advocacy for the rapid extension of railways in India. (See J. Chapman, *Cotton and Commerce of India*, 1851).

should be to supply the raw material to England, whenever it is required, and to take back her manufactured goods in any quantities that the manufacturers choose to send.¹ But many causes, notably the short staple of the Indian cotton, the enormous admixture of dirt in the cotton, the difficulty of communications and also the want of a stable export market, had prevented the exports of raw cotton from India from rising hitherto to a great height.² Then came the American Civil War ; the ports of the South were closed and there was a cotton famine in Lancashire. Naturally the English manufacturers turned to India.³ The effects of this creation of a sudden demand for Indian cotton were truly enormous. The Government undoubtedly exerted itself vigorously in the matter by the appointment of Cotton Commissioners for Bombay and the Central Provinces, by pushing forward construction of roads and railways and other measures ; but the cultivators also were very quick to seize the opportunity of making extra profit. The price of cotton had greatly risen and the growing of cotton became suddenly very paying. This enormous rise in the price of Indian cotton is shown clearly by the following figures.

PRICE OF INDIAN COTTON IN ANNAS PER LB.

1859	1860	1861	1862	1863	1864	1865	1866
2-7	3-7	4-2	6-4	10-5	11-5	7-1	6-2

It will be seen that the price of cotton had risen more than threefold during the course of four years. The trade in raw cotton also naturally rose to extraordinary

¹ Royle, *op. cit.* p. 20.

² *Ibid.* See also W. R. Cassels, *Cotton in the Bombay Presidency*, 1861.

³ *Correspondence on the Subject of Cotton Cultivation in India* (1863). [Parliamentary Paper].

heights on account of this rise in price, and the quantity available for export to the United Kingdom was more than doubled within these four years.

IMPORTS OF RAW COTTON INTO UNITED KINGDOM
FROM INDIA¹ (IN BALES).

1859	1860	1861	1862	1863	1864	1865
509,695	562,738	986,280	1,071,768	1,229,984	1,399,514	1,266,513

The rise in price combined with the increased quantity made the value of these exports formidable; and for a few years after 1864 their value formed more than half of the value of the total exports from India.

The enormous effects of the American Civil War—especially in the cotton-growing tracts—might be profitably illustrated by some extracts from the valuable reports of Mr. Rivett-Carnac, the Cotton Commissioner of Central Provinces and Berar. After describing the manifold difficulties in the way of the cultivator before 1860, he goes on to say, ' Suddenly, as if by magic, these obstacles were effectually and simultaneously removed, and the cotton trade as it was carried on in 1864 in Central India is hardly to be recognized by the side of the business as it is done in our markets to-day. Whilst the railway, slowly but surely, was working into the heart of the country, the position of the cultivator was undergoing a great and decided change. The operations of the Land Revenue Settlement relieved him of all anxiety regarding his tenure . . . and finally the American Civil War, by raising the price of cotton and pouring into the ryot's hand what appeared to him untold wealth, enabled all those, who were not utterly reckless and extravagant, to free themselves from the meshes of the money-lender's

¹ Statistics taken from the article on cotton (*Gossypium*) in G. Watt's *Dictionary of Economic Products of India*.

hands.'¹ The figures² for the extension of cotton cultivation in the Central Provinces given by the Cotton Commissioner are :—

Years	Acres	Years	Acres
1861-62	375,623	1865-66	587,398
1862-63	427,111	1866-67	598,801
1863-64	488,436	1867-68	735,633
1864-65	691,198	1868-69	750,875

These benefits of the American War were, of course, equally extended to all the cotton growing tracts.³ In Madras 'the ryots in the single district of Bellary alone made 1½ millions sterling by the sale of cotton in the three years of the American War',⁴ while in the Bombay Presidency the effects are described thus:— 'In 1862 began the period of extraordinary prosperity, caused by the rise in the price of cotton, which followed the American blockade. In those years the ryots would under ordinary circumstances have suffered severely from the constant deficiency in rainfall during five successive seasons. But the abnormal value of the produce made the scanty crop of a year of drought equal to the full crop of a good season.'⁵

But the real importance, in the economic sphere, to India lay not so much in raising the price of cotton and thus bringing about a temporary period of prosperity, but

¹ Annual Report of the Cotton Commissioner for C.P. and Berar for the Year 1867-68. (P. 132).

2 Annual Report of the Cotton Commissioner for C.P. and Berar for 1868-69. P. 3.

³ These benefits might be said to have been widely extended all over India. For, except Bengal, almost every province of India had large areas under cotton at this time.

⁴ S. S. Raghavaiyangar, *Memorandum*, etc., p. 39.

⁵ Report of the Committee on Riots in the Deccan, etc., p. 21.

rather in bringing home to the cultivator the fact that causes other than local needs were beginning to govern the nature and extent of the crops he sowed. Briefly, it was the event that most clearly and dramatically revealed a break in the economic isolation of India.

But the rapidity with which the demand for cotton from England was met by India was only made possible by the many measures of improvement, which had been undertaken in India during the past decade. Chief among these was the extension of roads and railways. The appalling state of communications before 1850 has already been described. Till about 1845 very little had been done to forward road construction in India. In the Madras Presidency after this date a certain amount of expenditure towards the construction of roads was sanctioned. Though this money was spent, the construction of roads was but little advanced till after the Report of the Commissioners (1852). From Bombay, a road to Agra was commenced in 1840; while in the Presidency itself, except for the road over the Bhor Ghat to Poona, little had been accomplished. The trunk road in the North was only from Calcutta to Benares, and even this was in a bad state. About 1850 the extension of this trunk road to Delhi was undertaken and the work was completed by 1853. But the real progress in road-building was begun under the vigorous Governor-Generalship of Lord Dalhousie by the newly formed Public Works Department. The trunk road to Delhi was completed and its further extension to Peshawar was vigorously begun.¹ Road-building thus really began in the fifties. After 1857 the necessity of roads for military purposes and also feeders for the great railway trunk lines was realized and the next decade saw a rapid extension of roads in India.

But this work was now overshadowed by the even more important work of railway extension. The question of railway building in India was broached as early

¹ Lieut.-General J. Briggs, *India and Europe Compared* (1857), chap. i. Part III.

as 1845. But when private companies were formed capital was not forthcoming. Then ensued the long series of negotiations between the companies and the East India Company on the question of a State guarantee.¹ These did not bear much fruit until the time of Lord Dalhousie's Governor-Generalship. Lord Dalhousie interested himself in the extension of railways in India and wrote two very able minutes on the subject, in one of which he sketched the routes which trunk lines in India should take.² An experimental line had already been undertaken near Calcutta in 1849; and in 1854 the first line of railway in India—from Bombay to Thana—was opened for traffic. From this date the work was pushed on vigorously until 1857, when it was temporarily checked. The ten years following saw a remarkable growth of railways in India; the work was carried on continuously and the length of miles open for traffic had been increased from 432 miles in 1859 to 5,015 miles in 1869.

It is not necessary here to discuss the system of guarantee and control by which railway construction was inaugurated in India. The first obvious effect of railways was, of course, that of making communication quicker, and for long journeys, much cheaper. This was very important, as it was the extension of railways and roads, that made possible the carriage of cotton in large quantities from the fields to the sea-ports. But, during the decade 1860-70, it had another effect which is also very important. Before this time a class of general casual labourer as such was almost unknown in India; such a class was non-existent because there was no demand for it. In old times the smaller works of utility, e.g. small canals, etc., were mostly built by the co-operative labour of the people in the tract, and the bigger works and also works such as the building of temples, monuments, etc., were generally constructed by forced labour of the cultivators of the surrounding country. During the regime of

¹ H. Bell, *Railway Policy in India*, chap. i.

² W. W. Hunter, *The Marquess of Dalhousie*, 1890, chap. vii.

the East India Company the number of big public works had been comparatively small; but the number of such works undertaken after the formation of the Public Works Department by Lord Dalhousie and especially after 1859 was very remarkable.¹ This naturally meant the employment of very large numbers of ordinary unskilled labourers throughout the country. The main classes from which these labourers were recruited were the agricultural labourers, the poorer classes of cultivators, who were glad to have an opportunity of supplementing their earnings in the off-season of agriculture and also a certain proportion of village artisans, especially weavers, who were now beginning to feel the effects of foreign competition. A natural result of this sudden demand for unskilled labour was a general increase in the wage rate. This rise in the wages was very large. The Committee on the riots in the Deccan say in their report, 'The competition for labour made it possible for the ryot to earn the assessment of an ordinary holding by a fortnight's work,'² and further, in more detail 'the ryots drew large sums from the competition for labour by migrating for a time to Poona or Bombay, where the labour available was employed at extravagant rates. The monthly wages of a common cooly in Bombay rose from Rs. 7-12-0 in the period 1860-62 to Rs. 13-8-0 in 1863. During the construction of the railway about 25 lakhs of rupees were spent in the area of the disturbed villages in payments, such as would remain in the district.³ Outside the district itself, but only 60 miles distant, the works on the Bhor Ghat gave employment to thousands: one contractor on a line of 14 miles employed nearly 40,000 labourers. Following on this after a short interval came increased expenditure on public works, rising in 1868-69 to 31 lakhs on public works and irrigation in Poona district alone.'⁴ The above clearly shows the effect on the wages in every

¹ These included a varied class, such as railways, roads, irrigation works, Government buildings, military barracks, etc.

² See above *Report*, etc., p. 21.

³ The area in which the subsequent riots took place.

⁴ *Ibid.*, pp. 47-48.

district in which railway or other public works were begun ; it also shows the phenomenal growth during the decade of such expenditure by the State.' In the Madras Presidency 'there was a considerable improvement in the condition of non-agricultural labourers also, as, owing to the construction of several railways and other public works, the demand for labour was great and continuous, and the rise in wages kept pace with the rise in the price of food grains.'¹

This indicates a tendency of prices to rise at about this time. The prices of food-grains and other products in India fluctuated enormously in all parts of the country during the first fifty years of the nineteenth century ; but through all these fluctuations there was one common tendency, and that was of the prices to fall. The common, and generally accepted, explanation of this phenomenon was the introduction of money economy in the country, especially the introduction of cash payments of Government assessments. India never produced any great amount of the precious metals, and so the quantity of bullion in currency at the beginning of the nineteenth century was very small. But this small amount was found quite enough for the purpose of the trade, inasmuch as most transactions were conducted by barter, and the volume of trade transacted with metallic currency was extremely small. With the introduction of the system of paying Government assessments in cash, the demand for money, especially just after harvest time, increased greatly. Thus the 'duty' thrown on the amount of currency in the country largely increased, and the prices of all commodities began to fall. This general fall in prices continued till about the middle of the century, when a reverse tendency began to operate. It was about this time that the discovery of gold mines in Australia and California and of silver in Mexico suddenly increased the world's supply of precious metals ; and it was about this time that the foreign trade of India was increasing by leaps and bounds. A large quantity of

¹ S. S. Raghavaiyangar, *Memorandum*, etc., p. 39.

these precious metals, therefore, necessarily found their way to India and set up a general movement towards an increase in prices.¹ The following provincial averages² indicate the extent of this tendency.

PRICES OF FOOD GRAIN (SEERS PER RUPEE)

Year	Rice Bengal	Wheat N.W.P.	Wheat Punjab	Jowar Madras	Bajra Bombay
1861 ...	27.07	18.45	19.23	25.54	21.55
1870 ...	22.74	15.5	15.13	22.68	13.2

Another tendency, equally well marked, was the tendency of prices in different provinces to correspond and the tendency of price movements in one part to affect the movements in another. This was especially noticeable in times of famines. Thus Mr. Henvey says in commenting on the ease with which the famine area in 1868-69 was supplied with food-grains from other parts of the country, 'It must not be forgotten that while railroads, and other means of easy communication lessen the danger of local famines, they also tend to widen the area in which high prices prevail.'³ This only shows the action of the tendency of equalization of prices in times of famines.

Fortunately this decade was comparatively free from famines. The nature of a famine in India is very important, as it was then, and in a modified form, it is even now, a prominent feature of India's economic life. It has been insistently remarked by all writers on Indian famines that a famine does not involve so much a lack of food, as a lack of employment. But this is a statement which

¹ Pedder, *Memorandum on Prices, etc.*

² J. E. O'Conor, *Review of the Prices and Wages in India, 1886.*

³ F. Henvey, *Narrative of the Drought and Famine in N. W. Provinces, 1868, 69 and 70.*

does not hold good of famines in India before the means of transport were improved. Famine then meant a lack of food as well as a lack of employment. For, as late as the Rajputana famine of 1868, people had to go without food even though they had the means to buy it, through an absolute lack of supply. The same fact is indicated by the large migrations of people from the famine districts to districts well provided with food, which invariably occurred in Indian famines of the early nineteenth century. Because the food was not to be had in their district the people had to migrate to districts where there was an abundant supply. Even in the famine of 1860-61 in the N. W. Provinces, when the means of communication were much better than they had been before, extensive migrations took place ; and although in the tract, as a whole, the supply was enough to go round, in the worst districts this was far from being the case. Here the practical question was then 'not so much how to get food, as how to get the starving people to the food or the food to them in the cheapest and the most expeditious way possible.'¹ The nature of the country in this case and the comparatively good means of transport enabled the food to be brought to the people. But, 'in cases like the Rajputana famine, in which distress is widespread and where no railroad or water carriage exists to bring the produce of distant countries to each person's door, the lives saved by human means are only few compared with those who perish.'² What the condition of Rajputana was in 1868, was the condition of the whole of India before 1850.

The decade 1860-70, which saw so many changes in the economic sphere in India, saw also a change in the nature of Indian famines. Henceforth, the Indian famine meant no longer an appalling lack of food, but only scarcity prices and a universal lack of employment. The famines that actually took place in the decade, though

¹ Col. R. Baird Smith, *Report on the Famine of 1860-61 in N.W. Provinces and the Punjab*, Sec. i, p. 13.

² F. Henvey, *op. cit.*, p. 97.

they involved a terrible increase in mortality—specially in 1868-69—were not very widespread nor very severe. The mortality also would have been much less if the Government officers had had at their command the very well organized system of famine relief, which was evolved later on during the century.

The rise in the price of cotton, consequent on the American Civil War, was a source of profit to all the cultivators of all the cotton growing tracts, and so also in a smaller degree to cultivators of all parts. At the same time the expenditure on public works was raising the wages of labour ; but the condition of the farm servant, on account of his being paid in kind, was not much affected either by the rise in the price of food grains or by the rise of money wages.

The reaction from this period of prosperity had begun as early as 1865 in the Madras Presidency. There was a slight famine chiefly felt in the Ganjam district. It is to be noted that, as the cotton boom had not passed as yet, the Ceded Districts which grew cotton did not feel the drought, though, under ordinary circumstances, they would certainly have suffered from it severely. After the Madras famine, the Rajputana famine (1868-69) followed. In this famine the mortality was very great, proportionately greater than in almost any other modern famine. There was a complete failure of the kharif crop of 1868, and, to make things worse, next year followed with a plague of locusts. Fortunately, the famine was not spread over a very wide tract. It was confined to Rajputana and the adjoining districts of the North-West Provinces. The difficulties of the situation were very great as there was an almost complete lack of communications in the interior of Rajputana. This was, perhaps, the last famine in India in which the scarcity of food, as such, was severely felt.¹ All the characteristics of the old Indian famine were brought out in this case. There were vast masses of people moving at random out of Rajputana in search of food, work, and fodder for their

¹ See above, p. 25.

cattle. The nearest cities in the North-West Provinces such as Agra and Delhi were blocked with people, who, famine-stricken, were driven out of Rajputana. In this aimless wandering in search of food, a great number of people lost their lives, but the mortality among cattle was even greater. It is estimated that the majority of the cattle of Rajputana perished.¹

Then famines quickly followed each other. First was the famine in Bengal and Bihar (1873-74). It can be said that the modern methods of famine relief were first put into practice on a large scale in this famine. Famine works were opened all over the districts, and relief was freely given. The officers had been so much impressed by the terrible loss of men and cattle in Rajputana, that they were resolved not to let any man suffer for want of relief. The result was a relief administered extravagantly. On an average about 26 per cent of the total population of the famine districts were relieved, and, in some, the percentage rose as high as 50 to 70. The Government prohibited the export of grain from the tract, and once when it was feared that private trade was not active enough, it imported grain largely on its own account. The expenditure on famine relief was excessive, but it must be said to the credit of the Government that there was no death from starvation.²

It was in the latter part of this decade that the series of famines covering almost the whole of India occurred. The famine was severest in South India, covering the major portion of the Presidencies of Bombay and Madras, the Nizam's Dominions and Mysore, and lasting from 1876 to 1878. At the same time a slight famine was felt in the North-West Provinces and Oudh. As usual in Indian famines, the rainfall in these tracts had been short and irregular for several years before the actual drought occurred. Thus the stocks of grain in reserve were very low. In the North-West Provinces, where the earlier

¹ *Report of the Indian Famine Commission (1880).* Part II. History of Past Famines.

² *Ibid.*

season had been favourable, the stocks had been greatly depleted by exports of wheat to Europe, as the wheat trade, on account of the opening of railways, was now growing rapidly. When the famine came, it found the country entirely unprepared for it. The miseries of the people were greatly aggravated by the fact that a very usual feature of the famines in India is the complete lack of fodder. What this meant to the people can be realized only when we consider what a great proportion of the capital of the peasant is usually invested in his cattle. Relief works on a large scale were opened all over the country, but still a large stream of people steadily emigrated from all parts of South India to the Western Ghats. This emigration differed from that which took place in the Rajputana famine, inasmuch as it was an emigration in search of fodder in the forests of the Western Ghats and not of food for the people themselves. Of food there was no actual lack. The railways and the activity of the traders in grain had distributed the available food supply all over the country very quickly. It was only in some parts of the Bombay Carnatic, to which the railway system had not yet been extended, that any actual dearth of food was felt. This famine was so widespread and terrible that the Famine Commission of 1880 described it as the worst experienced since the beginning of British rule in India.¹

The course of famines in the decade 1870-80 has been sketched above briefly, because the consequences of a famine were economically very important to India. It was especially so in this decade. Since about 1850 India had enjoyed a fairly long period of immunity from famines, and as pointed out above the conditions all tended towards a prosperous state of trade and agriculture.

The first and the most apparent effect of the famine on the country was in the rate of increase of the population.

¹ For a detailed account of the measures of relief taken and the different controversies, especially about the reduced or 'Temple Wage,' see William Digby, *Famine Campaign in Southern India*.

During the decade 1872-81 the population of India, as a whole, increased by 6.85 per cent.¹ But the increase was extremely irregular. As there had been no regular census before 1872 it is impossible to decide the exact rate of increase in the different provinces but the figures for the increases in the famine-stricken provinces bear eloquent testimony to the effect of the famines.

Bombay (British) : increase of 2.05 per cent in 9 years.

Madras Presidency : decrease of 1.35 per cent in 9 years.

Mysore : decrease of 17.19 per cent in 10 years.

Cochin State : decrease of 0.14 per cent in 6 years.

As there was no census of the Nizam's Dominions in 1872, figures for this tract are not available. Bombay Presidency shows an actual increase only because the whole of the Northern portion of this Presidency was unaffected by the famine. But even these figures do not convey the entire result. For example in the Madras Presidency everything points to the fact that the years between 1856-76 were very prosperous and that there was a considerable increase in the population during this period. According to Dr. Cornish during these twenty years the population of the Presidency rose from twenty-three to thirty-one and a half millions.² In the 1871 figures there were some omissions and therefore the real check to population was even greater than shown by the above figures. Another fact, which indicated this, was the diminution in the number of inhabited villages and the percentage of the houses occupied. In Madras Presidency the percentage of unoccupied houses rose from 6.11 per cent in 1872 to 11.71 per cent in 1881. It is not so much due to the deaths on account of starvation that the population figures suffered ; deaths from actual starvation were comparatively few in the 1876-78 famine.

¹ Report on the Census of India, by W. C. Plowden. 1881.

² Report of the Census of the Madras Presidency, 1881. By L. MacIver.

But the check to population came mainly from two results of the widespread under-nourishment of the people in famine times. The lack of sufficient food checked the birth-rate during times of scarcity, and the same deficiency, by emaciating the people, made them very easy victims of the epidemics of fever, cholera, etc., which are the invariable companions of famines in India.

Yet another effect of the famines, which was much more disastrous to the prosperity of India, was the setback to agricultural progress that a severe famine always meant. A curious proof of this fact is that the methods of cultivation are generally the worst in those parts of India which are most liable to periodical failures of rainfall. The expectation that a famine is bound to occur in a certain number of years acted as a hindrance to the cultivator's desire to improve his land or his cattle. This question of live-stock was very important. In most parts of India a very large proportion of the cultivator's capital was in the form of his draught cattle. But it was a form of investment that was most liable to suffer in times of famine. It has been mentioned that during the years 1876-78 there was a general movement of people to the Western Ghats in search of fodder. The Government, by opening the reserved forests to public grazing and by establishing fodder depots on the main routes towards the Ghats, did a great deal towards saving the live-stock of the country. But in spite of all the efforts of the people and the Government a very large proportion of the cattle died during the famine.

Famines undoubtedly played a very important part during this decade in India. They certainly caused a great deal of distress, but there were many other causes also at this time which contributed towards depressing still further the condition of agriculturists. The various factors that tended to create the elusive prosperity of the last decade have been detailed above; but that the prosperity was mainly founded, at least in the Bombay and Madras Presidencies, on the rise in the price of cotton is shown by the sudden reaction which followed the lowering of the price of cotton on the close of the Civil War.

As soon as America resumed its export of cotton the demand for Indian cotton fell sharply and at the same time there was a general dislocation of trade in Bombay and the failure of many prominent merchants followed. The peasant also had generally failed to profit by the spell of prosperity that he had enjoyed ; he had in most cases spent the money he gained recklessly.¹ In some cases indeed, the cultivators on account of their increased credit had actually increased their liabilities. Thus with the slump in the cotton market the position of the cultivator became suddenly very bad.

At the same time the assessments began to fall heavily on the cultivator, especially in the South. It so happened that the period of the revision of assessments here coincided with the temporary period of prosperity enjoyed by the cultivator during the sixties. The revenue officers taking the profits of cultivation then obtaining as the standard, raised the assessments generally a great deal. But when the period of prosperity had passed away the peasant naturally found it very difficult to pay his assessment and was further forced into borrowing largely.²

Then again there was a general depression of trade all over the country and some of the industries specially felt the effects of the Franco-German War. The prices of food grains which had been constantly rising through the previous decade became either stationary or—excepting the famine times—began slightly to fall. The State was still spending large sums of money on the public works but this was not the only purpose for which it was now spending money. With Lord Northbrook's resignation in 1875 the Government of India entered on a policy which entailed more and more expenditure in military expeditions and establishments. Consequently the burden of taxation was pressing more and more heavily on the mass of the people.

¹ Evidence of Mr. Nowrojee Furdunjee before the East India Finance Committee, 1872.

² *Report of the Committee on the Riots in Deccan, 1876.*

All the above causes, combined with a succession of severe famines, produced a measure of distress which had not been felt by the people for many years. A very significant occurrence produced by this distress was the riot of the peasants in certain Deccan districts. In the districts of Poona and Ahmednagar of the Bombay Presidency the peasants spontaneously rose in many places and robbed and wrecked the houses of the money lenders. In some cases even greater violence was committed. In most places the demand of the peasants was for the return of the debt-bonds. Many peculiar causes had combined to produce this disturbance. There had been a vast amount of expenditure in these districts during 1860-70 on account of public works ; but these works had now been completed. This was also one of the tracts in which the cultivator had specially found that, on account of the cotton boom, his credit had expanded and he had utilized this fact in extending his debt obligations. Also in these parts the money lending business was in the hands of Marwaris, a particularly unscrupulous lot of money-lenders, foreign to the province. The disturbance was put down with ease but the Committee which enquired into the causes of it found that it was due to some very deep-seated evils.¹ It is a well-known fact that agriculturists all over the world become involved in debt with fatal ease. It was specially the case in India where farming on a large scale is unknown to any great extent. But before the advent of the British this process was checked a good deal by the many restrictions on the transfers of land ; and also in some parts, by the State refusing to give any help to the money-lenders to recover their debts.²

The British had given rights of free transfer and absolute ownership—especially in the 'ryatwari' tracts—to the cultivators which they had never possessed before. Again the judicial system which had been adopted gave the money-lender a great power over his debtor, and

¹ See above. *Report of the Committee*, etc.

² *Ibid.*

finally the Limitation Act, making the renewal of the debt-bond in short periods compulsory, made the position of the debtor much worse.¹ Thus, though there was nothing in the nature of a peculiar hardship in the mere fact of an agriculturist being indebted, these other causes acting in concert had reduced the debtor, in many cases, to the position of a virtual serf. The process of a general trade expansion, and the fact that the crops of the cultivator had begun, all over the country, to acquire a distinct market value, had expanded the credit of the cultivator. The ease with which the money could be recovered through the courts, had made the money-lender more ready to lend. The process had gone on during the period of prosperity and the cultivator was quite oblivious of where he was going, but as soon as the reaction came and the money-lender began to tighten his grips on the cultivator's land, his real position was brought home suddenly to the cultivator.

The above applies, with certain reservations, substantially to all parts of India.² The causes given above and their effects are very important; for in this decade was thus started the movement of a gradual transference of land from the hands of the original cultivators to—in most cases—the money-lenders. The process can be termed beneficial, if at all, only in cases in which the land thus transferred was acquired by the land-owning classes or others who were careful agriculturists; but in most parts of the country this was not the case. In the Deccan, for example, the Marwari never wanted to take possession of the land; in many cases he did not have the land transferred to himself legally, but it was

¹ See above. *Report of the Committee, etc.*, chap. v.

² See Appendix A to the *Deccan Riots Commission Report*: 'Papers Relating to the Indebtedness of the Agricultural Classes in Bombay and Other Parts of India' (1875). For a very close parallel in the Punjab see S. S. Thorburn, *Musalmans and the Money Lenders* (1886) and *Note on Land Transfer and Agricultural Indebtedness in India* (1895); also *Evidence on Agricultural Indebtedness, Famine Commission* (1880).

still allowed to remain in the old cultivator's name ; the Marwari merely appropriated to himself the entire profits of cultivation in virtue of the large number of debt-bonds that he held. The cultivator had to toil hard each year and at the end of it his mere subsistence was dependent on the clemency and reasonableness of the 'Marwari'. Thus was a great portion of the Deccan peasant class reduced to virtual serfdom. It was to combat this tendency that the Government began the long series of legislative enactments restricting the right of land-transfer of which the first is the Deccan Agriculturists' Relief Act (1879).

It might be interesting to note here the chief provisions of this Act. Firstly, the arrest or imprisonment for debt was abolished. This was wholly a beneficial measure ; for this was the chief weapon in law, by the threat of applying which the money-lender had got such a hold over the peasant. After certain conditions had been satisfied, the debtor might be declared insolvent and free from future liability. It is a striking proof of the honesty of the peasant that this provision was very rarely resorted to. A system of village munsiffs and boards of conciliators was created to deal with cases up to a small amount and to arrive, if possible, at an amicable and reasonable settlement of the account. The courts were also bound to enquire into the previous history of the debt in the case of an agriculturist.

It might be said that during the decade 1870-80 the agriculturist all over India lost a good deal of the progress that had been made previously. In some tracts indeed his position had been very bad for a long period,¹ but a general comparative statement is impossible. The area of cultivation and the nature of the crops grown were naturally affected by the famine conditions, but whether there was a general increase in the area under cultivation or any important change in the crops is impossible to say on account of the entire lack of agri-

¹ Note on the condition of the Jhansi ryot (see *Evidence on Agricultural Indebtedness*). *Famine Commission*, 1880.

cultural statistics.¹ But there is no outside evidence for supposing any such changes. Only one thing is certain, from the evidence before the Finance Committee and Famine Commission and other sources, that the condition of the agriculturist at the end of this period was one bordering on extreme poverty.

¹ *A Note on Agricultural Statistics in India*, by C. A. Elliott (Appendix II, *Report of the Famine Commission*).

CHAPTER III

THE DECLINE OF THE HANDICRAFTS

THE urban industry of India, at the beginning of the nineteenth century, was mainly in the nature of handicrafts, producing fine textiles or other luxury products for the aristocracy. Though the urban industry was thus limited in its scope and extent, it was in a way very important. For it was the best organized industry in India and also it was the first to feel, on account of its position, the effects of foreign competition.

There is no doubt that in these handicrafts Indian urban industry had reached a high water-mark of excellence. The products of Indian industry enjoyed a world wide reputation. The 'calicoes' and the 'corahs' of Bengal formed an important item of the Indian trade in the trading days of the East India Company. The high quality of these artistic products has never been questioned. It was their special merit that while maintaining their high artistic standard they never sacrificed utility.¹ Dr. Watson remarks, 'The Indian taste in decoration is in the highest degree refined. There is no waste of ornamentation . . . nor is there any lavish expenditure of ornament which so often purchased *show* at the expense of comfort.'² A Frenchman, M. Blanqui, when he saw the Indian section of the Great Exhibition of 1851, paid a high compliment to the Indian craftsman when he said 'Les Indiens sont les Français de l'Orient pour le génie industriel.'³

The chief industry was, of course, the textile handicrafts. Among these the cotton industry was easily the

¹ Dr. Royle, *Arts and Manufactures of India*. Lectures on the results of the Great Exhibition of 1851. First Series.

² Dr. J. F. Watson, *The Textile Manufactures and the Costumes of the People of India* (1867), p. 5.

³ Royle, *Arts*, etc., p. 534.

first. The handicraft was spread all over India.¹ The muslin of Dacca was the finest and best known of all these. It was of this that a Manchester manufacturer, when he could not rival its fineness, said deprecatingly, that it was but a 'shadow of a commodity.' In 1880, muslin was still produced in Dacca, but the quality had greatly deteriorated and the industry itself was rapidly dying out. It was an industry which depended entirely on the existence of a court, rich and luxurious. A piece of the finest muslin (Mr. Mukherjee² mentions) 20 yards long and one yard wide could be made to pass through a finger ring and required 6 months to manufacture. With a court, fairly regular orders would perhaps be forthcoming, but without one, the industry was doomed. Besides Dacca, muslins were made at Krishnagar, Chunderee and a few other places.

Next to muslins in importance were the fine cotton fabrics of all kinds manufactured practically all over India. Lucknow in the N. W. Provinces was famous for its *chinizes*, Ahmedabad for its *dhoties* and *dopattas*. In the Central Provinces Nagpur, Umrer and Paoni were well-known for their silk-bordered cloths. In Madras Presidency the speciality was the *palampore*³ industry. The fabrics of Madura and many other places were also famous.

The cotton manufactures were, of course, the most widespread; next to them came the manufacture of silk cloths. Of these the most famous were the *choppahs*, *bandanus*, and *corahs* of Murshidabad, Maldah and other Bengal towns which were greatly in demand for exports;⁴ the fine flowered brocade work done at places like Benares and Ahmedabad, and the fabrics in double weaving of colours produced at Poona, Yeola and other places.

¹ For a general description and distribution of the handicrafts see Royle (above). Sir G. Birdwood, *Industrial Arts of India* (1880) and T. N. Mukherjee, *Art Manufactures of India*.

² T. N. Mukherjee, *A Handbook of Indian Products*, 1883.

³ See article on 'The Decline of the South India Arts' by Pandit Natesa Satsu in the *Journal of Indian Art*, 1889-1890.

⁴ J. Geogaghgen, *Report on silk in India* (1874).

In woollens the best known of the artistic products were the Kashmir shawls, chiefly produced in Kashmir and in Amritsar, in Ludhiana and in several other Punjab towns. By 1880 the industry was rapidly declining and indeed this decline was so rapid that by 1895 the industry was already a mere tradition—a memory of the past.¹ The history of this industry is very interesting as showing within a short time the various phases through which the other handicrafts passed when they came into contact with a new set of conditions. The industry was originally confined to Kashmir but the fame of the Kashmir shawls was spread all over India and the shawls were in demand in the courts everywhere. In about 1830 a great famine occurred in Kashmir, which drove a great number of the shawl weavers to the Punjab. They settled in the Punjab towns and plied their craft there. By now, Amritsar had become the chief emporium of the shawl trade. But at this time, i.e. about the middle of the century, a great change was coming over the industry. The shawls were becoming popular in Europe—especially in France—and the French traders were slowly getting control over the industry. In the sixties they had got almost complete control of the industry. They used to advance money to the weavers, and buy the finished goods from them. It must be said to their credit that they fought and resisted the evil of adulteration and prevented the introduction into the industry of aniline dyes—an event which has been considered by all experts on the subject to have been one of the main causes of the decay of Indian textile handicrafts.² But the Franco-German War was a great blow to the industry, a blow from which it never recovered. The war cut off the French demand effectually and even after the close of the war, the change of fashion in France and other causes prevented the

¹ Sir W. R. Lawrence, *Valley of Kashmir*, p. 375 sqq.

² But in Sir G. Birdwood's opinion the introduction by the French traders of European patterns of all kinds which happened then to be fashionable, marked the beginning of the rapid deterioration in artistic merit of the industry. See Birdwood, *op. cit.*

revival of the demand. In the sixties the shawl industry was perhaps the most flourishing art manufacture of the Punjab.¹ But in the next decade it rapidly deteriorated ; the evils of adulteration and the harmful aniline dyes rapidly crept in ; the temptation to put cheaper and inferior goods on the market spoilt the reputation of the industry ; and the position of the weavers went from bad to worse. The shawl industry became a sweated industry. Simultaneously Paisley was beginning to bring out cheap imitations of the shawls. This was the final and the fatal blow. Under it the industry succumbed and, as remarked above, had already in the nineties become a mere tradition.²

Leaving aside the textiles and woven stuffs, there was the working in metals. Benares was famous all over India for its brass, copper and bell-metal wares. Other important centres of this craft were, in Bombay Presidency, Nasik and Poona ; and in the South, Hyderabad, Vizagapatam and Tanjore. These were only some of the more important centres of an industry which was spread all over the country. Many other metal crafts had also reached a high standard such as enamelling, damascening and *bidri* work. The damascened work was specially used in ornamenting arms, shields, etc. It was chiefly practised in Cutch, Sindh and Punjab towns like Sialkot, Kotli, Lahore, etc.

The towns of Rajputana also excelled in all kinds of artistic work, specially enamelled jewellery, stone carving, etc. The number of such handicrafts found throughout the cities of India was very large ; and most forms of artistic handicrafts were practised at one place or another. In the handicrafts themselves, there was a good deal of division of labour. This division of labour was naturally not so minute and complete as in these days of improved mechanical appliances ; but as far as the various appliances then used allowed it, division of

¹ Watson, *Textile Manufactures, etc.*

² Sir W. R. Lawrence, *op. cit.* and *Monograph on Woollen Manufactures of the Punjab*, by D. C. Johnstone (1886)

labour was undoubtedly carried out in these artistic industries. For the attainment of any high degree of skill and excellence in any branch such a division was obviously essential. Thus, in the making of gold or silver thread, the materials had to pass through many different sets of workers. Side by side with this division of labour there was also some degree of localization of industry. But this localization was very imperfect.

Thus every important city had its full complement of the different handicrafts. Undoubtedly, on account of the forces of nature controlling the supply of raw materials or other causes, some handicrafts were localized in different parts of the country, for instance the shawl industry or the *papier-maché* work in Kashmir.¹ It is also true that on account of the force of a long tradition and other similar reasons certain crafts became almost the monopolies of particular cities, e.g. the marble inlaying work at Agra.² Again particular localities had become famous for their special products: instances of this might be cited in the *paithani* of Yeola which was famous throughout the Maratha country, the *kincob* of Ahmedabad which was known throughout India, or the *phulkari* work of certain cities of North India. But these exceptions do not vitiate the point made out. These specialized goods were generally only those requiring the highest skill in their manufacture and the demand for them outside the place of their production was very limited. The chief feature to be noticed is that the demand for the products of the handicrafts was confined, mostly, to the place where they were produced. The outside demand, except for a few rare cases, was insignificant. This restriction on the area of demand was the most serious limitation of the Indian handicraft industry. For it adversely affected its size and also the development of its internal organization.

¹ Another good example is the sandal-wood carving of Mysore and South Kanara.

² The proximity of the marble quarries of Rajputana was certainly greatly responsible for the localization of this industry in Agra.

Still, as compared with the other existing forms of industry in India, the urban industry was certainly the best organized. The great majority of the industrial population of India lived in villages, but they were ordinary artisans, most of them village servants, who plied their traditional occupations uninfluenced by the outside world. Here there was no specialization; the economic organization was of a most primitive type. But in the bigger cities each craft was organized into guilds, who looked after the welfare and also the quality of the work of its members. Sometimes, as in Ahmedabad, the highest personage of the city was made the titular head of the guilds and called the 'Nagar-Seth' or the City-Lord. Sir George Birdwood gives the general constitution of these guilds as follows: 'Each separate guild is managed by a separate court of aldermen or Mahajans, literally "great gentlemen." Nominally it is composed of all the freemen of the caste, but a special position is allowed to "Seths", or lords, chiefs of the guild who, ordinarily two in number, hold their position by hereditary right. The only other office-bearer is the salaried clerk or "gumasta."¹ In general with handicrafts everywhere each independent craftsman was not a big capitalist. He generally worked to order and worked on the materials supplied by his customer. But as far as the circumstances permitted the urban industry in India was well-organized, and provided that the demand for their products was forthcoming, they were in a flourishing condition. In short, at the beginning of the nineteenth century they occupied a very favourable and important position in India's economic activity. In spite of this, we are confronted with the problem of a rapid decline both in artistic excellence and economic importance of these handicrafts, a decline which though in some cases it began as early as the end of the eighteenth century became very marked about the middle of the nineteenth century.

The causes working towards this result were very

¹ Birdwood, *op. cit.*, vol. i, p. 139.

numerous. But the most important of these were (1) The disappearance of the native Indian courts ; (2) The establishment of an alien rule, with the influx of the many foreign influences that such a change in the nature of government meant ; (3) The competition of a more highly developed form of industry.

Of these, the first meant the cessation of the main source or rather the entire source of demand for the products of these handicrafts. We have quoted Mr. Hoey above to show what effect this had on the handicrafts of Lucknow. The abolition of the court of the Nawab meant that the fine articles which were in demand by the nobles for State occasions and for display in durbars and other ceremonial occasions, were no longer required.¹ Wherever the court was abolished, the handicrafts and the arts began to decline. The process was naturally not rapid in the beginning. Though the court disappeared, the class of nobles remained ; the reputation of the place could not be destroyed suddenly, and the manner of living of a whole class could not be changed at once. Thus the demand for the luxury goods survived the disappearance of courts in most places ; but this was a steadily diminishing demand. The younger generation was brought up unaware of the splendours of the old durbars except by hearsay ; and they had not the same inducement and means as of old to patronize the arts and the handicrafts. The same point is well brought out by another fact. For though British rule slowly extended all over India, many places did not come directly under it. The native feudatory princes, though shorn of much of their glory and wealth, still remained in many places. It is a suggestive fact that the handicrafts were quite flourishing in many of the capital towns of these States, while they were dying out

¹ The Nawabs of Oudh indirectly fostered a flourishing dyeing industry at Lucknow by a prescription that the nobles should appear in different coloured cloths on the different festivals, etc., during the year. The decline in the Lucknow dyeing industry after 1856 was very rapid. (S. M. Hadi, Monograph, *Dyes and Dyeing* ; *N. W. Provinces*, 1896.)

rapidly in the British territory. The examples of this were to be found in Kashmir, in some of the States of Rajputana and Kathiawar and in the Nizam's Dominions. But there is another consideration; not only did they create a demand for these artistic goods but also the princes retained some of the best craftsmen, giving them a regular salary.¹ Thus the craftsmen, assured of their livelihood, could produce their wares and develop their ideas at leisure. All experts are agreed that the craftsmen produce their best when they are not in a hurry to put their wares on the market. The point need not be laboured further but it is clear that the disappearance of courts struck the first blow at Indian handicrafts by steadily curtailing the demand for their products. The immediate effect of this was the stoppage of the production of the highest class of goods such as would be required only by the princes and the highest nobles on a big state occasion. The ordinary demand did continue for some time even after this disappearance of the courts, but it invariably had a tendency to diminish steadily.

Still the deterioration of the handicrafts cannot be completely explained merely by the fact of the disappearance of the courts. For even where the courts remained, the decay, though slower, was as inevitable as in the British territory. The second reason partly accounts for this; for with the establishment of an alien rule, foreign influences, unfavourable to the existence of these handicrafts, made their way into the Feudatory States also.

It has been pointed out above how the demand for the industry, maintained by the existence of the court, had been cut off. It is natural to enquire what was the new source of demand. The demand for the wares which the handicraftsmen produced could only come from the richer urban classes, and, therefore, one naturally turns to the classes which under British rule occupied the position

¹ Sometimes the State conducted large manufactories on its own account. See Prof. J. Sarkar's article on 'State Industries in the Mughal Empire,' *Modern Review*, November 1922.

economically held in the old times by the nobles of the court. No doubt, many of the descendants of the old noble families were still very rich, but being mostly landed proprietors and having now no attraction to remain in the towns, they had naturally retired to their estates. Their position was now occupied in the towns by two classes ; (1) the European officials and (2) the new educated professional class.

With the demand for Indian wares created by the official class may also be classed the demand of the European tourists. The effect of this demand on the Indian handicrafts was two-fold. Firstly it certainly arrested the decay of these handicrafts. The demand created by them was very small as compared with the demand created by the presence of an Indian court, but it was certainly a help to stay the rapidity of the fall. But the other effect, which the European demand had, is of a doubtful value. This demand undoubtedly tended to lower the artistic value of goods produced. A very salient example of this was seen in the Kashmir shawl industry, when the French agents began to introduce European patterns in the industry. But it was the same story everywhere. The Europeans introduced new forms and patterns, which the craftsman did not understand. They laboured to please their customers and assiduously copied these forms. The products occasionally were bad copies of the original,¹ but even when they were good copies, they lacked the life and vigour of indigenous articles. In any case, the effect was disastrous to indigenous art. Mr. Maclagan remarks very briefly on the state of *kostgari* industry at Kotli thus : 'the workmanship here is declining and the prices rising ; the result of indiscreet European patronage.'² And everywhere we see the same sentiment expressed. Indiscriminate European patronage was lowering the standard all round.

¹ 'European forms are also being copied and badly copied.' Monograph, *Pottery and Glass : Punjab*, by C. J. Halifax (1892).

² E. D. Maclagan, Monograph : *Gold and Silver Work : Punjab* (1890).

But it was not only the introduction of new patterns and want of discernment in the case of the old. The demand of the European tourists, which was one of the mainstays of these handicrafts, was again a demand for cheap goods. They demanded ornamented knick-knacks, souvenirs, etc., as cheap as possible, and they got them. But with the result that they also got extensive adulteration in the raw materials used and extremely hasty workmanship.

The next class which was the natural successor to the position of the nobles was the newly created educated class. This was mostly an urban and professional class, somewhat corresponding to the professional section of 'bourgeoisie' of the West.¹ This new class might have been expected to patronize the handicrafts. But it may be said that the demand from this class did not amount to even as much as the demand from the Europeans. Indeed, with a few exceptions they entirely turned their back on the indigenous arts. One of the most harmful effects of a foreign rule is the imposition on the conquered peoples of the ideals of the conquerors; and the newly created Indian 'bourgeoisie' showed itself during the latter half of the last century extremely ready to accept European standards and pour scorn on everything Indian. This was especially so in the case of the arts. To follow European fashions was considered the hall-mark of enlightenment. Consequently the products of indigenous industries suffered. In the monograph on the Punjab silk industry we read, 'To wear silk is not the fashion it used to be in Sikh times or to the extent it still is in the Native States. European cotton goods, printed calicoes and cheap broad cloths have turned silken garments out of the field.'² Also from the North-West Provinces, 'The trade in the finer products of the potter's arts when of pure oriental design meets with no encouragement.'³ Very often one comes across the

¹ For an interesting account of the rise of 'bourgeoisie' in India, see M. N. Roy, *India in Transition*, chap. i, 1922.

² H. C. Cookson : *Monograph*, etc., 1892.

³ Dobbs, *Monograph : Pottery and Glass : North-West Provinces* 1895.

remark in the official monographs on these industries—‘The demand is purely European’. It was perhaps natural for this class to act as it did; it was itself entirely a product of the British rule. But in a number of cases their tastes were almost forcibly fixed for them by some stupid rule or convention of a European official or by the fear of incurring the displeasure of this class. Thus Mr. Kipling explains the decay of the embroidered shoe industry, ‘No sumptuary regulations to restrain extravagance in gilded shoes, and enforce the use of plain black leather could be half so potent as the unwritten ordinance, which permits an Oriental to retain a pair of patent leather boots on stocking feet and requires him to doff shoes of native make, when in the presence of a superior.’¹ But these were not the only adverse influences. In one peculiar case the British Rule effectively killed a handicraft. This was the damascening and inlaying of arms, weapons and shields, which, according to Dr. Royle,² was as late as 1850 common all along the North-West portions of India—in Cutch, in Sindh, in the Punjab. By removing the necessity for, and by an active prohibition of, the use and possession of arms, the British succeeded in reducing this industry to the state of being confined to produce ornamental knick-knacks for European tourists and others.³

The establishment of the British rule also affected the handicrafts in another way. For it indirectly weakened the power of the guilds and other bodies which regulated the trade and saw to the quality of the materials used. But as soon as the supervising bodies were removed, many evils began to creep in immediately. These were, for example, the adulteration of materials, shoddy and slovenly workmanship, etc. These at once led to a decline in the value, artistic and commercial, of the wares.⁴

¹ Kipling, ‘Article in the *Journal of Indian Art* on “The Industries of the Punjab” (1888), No. 11.

² Royle, *Arts, etc.* See above.

³ See above Mukherjee, *A Handbook*, etc.

⁴ Many of these trade organizations which supervised the quality of the work, etc., remained in existence till comparatively

While, undoubtedly, the disappearance of the courts and the establishment of an alien rule contributed mainly to the decay of the Indian handicrafts, the competition of European manufacturers was also partly responsible for the process. This was specially the case in the matter of textiles ; and the finer branches of this craft were very readily hit. For the ordinary peasant wanted a cloth, which, though coarse, should be at once cheap and durable. This the European manufacturer was unable to produce at the price required ; thus the village weaver was more or less untouched by the European competition ; and the urban weaver, who worked in a somewhat finer class of goods, had to bear the whole brunt of the competition. In the matter of quality, the Indian weaver could easily hold his own ; but, in the matter of price, he was hopelessly beaten by the machine-made goods. There is no doubt also that the great regard for everything foreign by the Indian middle classes helped the foreign goods a great deal in their competition with the Indian textiles. The point must be emphasized here that the foreign competition was not so important in this question. The more general preference for cotton in place of silk, for example, cannot be said to have been the result of the competition of foreign cotton goods with the indigenous silk industry, but rather shows a change of taste and fashion.¹ The competition of European cheap luxury goods with the products of Indian urban industry did not begin till very late, and by that time the indigenous industry was already rapidly decaying.

recent times. Especially was this the case in such industries as wire and tinsel, where it was necessary to guarantee the purity of the raw material used for keeping up the reputation of a place. See E. Burdon : Monograph, *Wire and Tinsel : Punjab*, 1909. In many places, e.g. Lucknow and Delhi, the industry began rapidly to decay as soon as the supervisory bodies vanished. See Hoey, *op. cit.* ; for similar experience in Kashmir industries see W. R. Lawrence, *op. cit.*, pp. 373-74.

¹ In Burma, where popular tastes in this matter have not changed, the position of silk is unaltered ; though lately the indigenous silk industry is suffering under the severe competition of Chinese and Japanese cheap silk products.

In some cases, such as the dyeing, the decay of the industry was directly due to foreign competition, but this is an exceptional case. The chief reason, then, for this decline was the cessation of the chief source of demand, and the change in tastes of the people.¹ But the rate of decline was greatly furthered by the conjunction of other causes. How rapid this was will be gathered from the fact that, for example, some crafts noticed by Sir George Birdwood in 1878 in Lahore were no longer existing there in 1888.² The decay was both in artistic and commercial value. The very great difference between the artistic merits of the old and the new was very well seen in the Delhi exhibition of 1902.³ It is very instructive to observe that the very highly praised Bhavnagar house at the Delhi Exhibition of 1902 had been specially prepared, by the order of the Maharajah, by artists working strictly according to ancient rules.⁴ But for such work leisure and certainty of demand were two things required above all, and such conditions did not obtain any longer. Efforts to revive the arts and crafts have been numerous of late years. They have been slightly helped by the schools of art, etc., and also the movement has been carried on by men like Messrs. Havell and Kumarswami. These have borne a certain amount of fruit. The new school of painting in Bengal, which draws its inspiration from the old Indian painting tradition, is an example. But these efforts are in the direction of art, properly called, and not industrial art or artistic handicrafts. In

¹ The change of taste also came about, though later in the Native States with the same effects. Mr. Collin in 1890 states 'Bengal is very deficient in arts. They formerly flourished in the shadow of the courts of Native Princes and have disappeared with them. Modern Rajas appear more inclined to patronize foreign productions than the arts of the country, and the native artists have not adapted themselves to the times.' (p. 12). E. W. Collin, *Report on the Existing Arts and Industries of Bengal* (1890).

² See above, *J. of Indian Art*, 1888: 'Industries of the Punjab.'

³ Sir G. Watt, *Art at Delhi* (1902).

⁴ *Ibid.*, p. 18.

some of these, new patterns have been introduced and new methods tried, but the tastes of the people are not yet refined enough ; and now-a-days the competition of cheap foreign luxury goods damps the ardour of the revivalists. The process of decay, begun by the establishment of foreign rule and helped on by the force of foreign influence, was completed by the competition of foreign goods. And towards the end of the last century, the urban industry of India had only two courses left to follow, either to change its methods and turn out cheap art wares—products generally of a terribly sweated industry—of doubtful artistic value, but paying commercially like the art industries of Japan, or keep to their old standards and face decay—slow or rapid.

This was the history of old Indian urban industry, then the most important form of organized industry in India. For a time, now, there was a relapse, a retrograde step, and India in the eighties afforded the spectacle of a huge country with decaying handicrafts, with any other form of organized industry almost non-existent and a consequent falling back upon land. The decay of urban industry certainly heightened the pressure on land, not so much by an active migration from the cities (not that this was entirely absent), but by the retaining of people on land who would, otherwise, have been in due course absorbed into the urban industries. For this population it was necessary to find an outlet, and thus we come to the question of the new forms of industry which were being introduced into India at this time.

NOTE.—It will be observed that throughout the above chapter the word handicraft has been used in a peculiarly restricted sense. It has been used to mean only the luxury and semi-luxury industries, which were the peculiar urban industries of India. It will be seen also that a two-fold division has thus been made in the old Indian industry. On one side are the village industries, which included the village servant class of artisans and also such classes as the country weaver, goldsmith, etc. The characteristic of this class was that they were spread throughout India. This class of industry was

also confined, more or less, to the primary needs of man and the organization of industry was of the crudest. The second class is that of urban industry, better organized and confined to the higher class of products. The division is obviously of a rough nature. In the villages a luxury industry was a very rare phenomenon; but in the town there were always some industries, which were akin in the nature of their products to the village industry group; for example, a certain amount of coarse weaving, ordinary pottery work, etc., were always to be found in the towns. (But even in this the urban worker was generally better organized.) Again the twofold division, as regards the same craftsman even, is somewhat fallacious, for a brass and copper smith, who produced artistic wares, might also habitually produce common utensils. In spite of these somewhat obvious defects, the twofold division is in the main true. For though there was a common artisan industry in the towns, the handicrafts were by far the most important and significant section of urban economic activity in India.

There were however certain other industries in India, which could not be included in any of the above classes. This group of industries, as a whole, was not very important; but it contained certain important industries. The group included the iron-smelters of Mysore, Chota Nagpur, Central Provinces and other places, the saltpetre worker, the bangle-maker and the general worker in glass, also the paper-maker, etc. These cannot obviously come under any of the above groups. They were mostly localized industries, carried on only in some parts of India. A good many of these required special knowledge on the part of the workers. In many of these, organized working was necessary on account of the peculiarities of processes and other reasons. The specialization of these industries, in peculiar localities, was almost entirely due to the nature of the supply of the raw material. This accounts for the location of the iron, the saltpetre and the glass industries. Some of these, such as iron-smelting, were industrially very important

to the country, and the products used to find their way all over the country. The methods employed were generally crude and uneconomical, but the product, as in the case of Mysore steel, was sometimes of a very high quality. But all these miscellaneous industries were already dying out. An unwise tariff and the discovery of Chili nitrates gave a serious shock to the saltpetre industry ; the iron-smelting industry was suffering from the great rise in the price of charcoal—due to the reservation of forests and the extension of railways—and the competition of imported pig-iron. The glass and paper industries were also succumbing under the pressure of imported goods. Thus the opening up of the country was resulting in the killing of all indigenous industries.

CHAPTER IV

THE BEGINNINGS OF MODERN INDUSTRY

SECTION I

The Plantations

WE now arrive at a consideration of the new forms of industry which were being introduced into India at this time. It should be observed that there were two forms of such industrial activity now being introduced. The first was the plantation—a form of industry to be found extensively in most of the tropical possessions of European countries, and the other the factory industry—the peculiar product of the latest economic transition in Europe.

The plantation was the first to be introduced into India; from the beginning, the industry was purely European. It was the beginning of European exploitation of Indian resources. It is perhaps surprising that till the middle of the nineteenth century there was very little part taken by the Europeans in the industrial activity in India. But the many restrictions placed on Europeans permanently acquiring land in India—placed by the East India Company for safeguarding its interests—the trading monopoly of the Company which lasted till 1833, the lack of internal communications, and also the deplorable lack in India of fertile but sparsely populated tracts, hindered the early growth of such activity. But as some of these obstacles were slowly removed, we find an enormous growth of European industry in India, especially during the years 1860-70, as evidenced by the growth of the tea, coffee and jute industries.

The indigo industry is an exception to the above statement, for the manufacture of indigo by European planters began in India before the end of the eighteenth century. Indigo had been grown in India from ancient times, having been chiefly produced, in Dr. Watt's

opinion, in Gujarat and Western India.¹ The trade in the indigo dye was carried on extensively by the East India Company, but towards the end of eighteenth century, on account of the competition from America and also on account of adulteration of the dye, the trade fell off a good deal; and the Western Indian industry almost died out. The East India Company resolved to revive the industry and for this purpose they brought planters from the West Indies and settled them in selected districts of Bengal.² The Company's officers were also allowed to trade in indigo. This was towards the beginning of the nineteenth century and the establishment of the industry in Bengal gave the death-blow to the Gujarat industry. The next fifty years saw a rapid growth of the industry and by 1850 indigo was one of the most important exports from India. But though the trade and the profits of the foreign planter had been growing at such a rate, it is very doubtful how far the condition of the peasant had improved. As a matter of fact, his condition was worse in the indigo tracts than in other parts of the country. Lord Macaulay wrote about 1840, 'that great evils exist, that great injustice is frequently committed, that many rayats have been brought, partly by the operation of the law, partly by acts committed in defiance of the law, into a state not far removed from that of partial slavery—is, I fear, too certain.'³ The planters were, as a matter of fact, a body caring little for the law,⁴ and being members of the ruling race had little concern for the interests of the peasant.

The system on which indigo was cultivated was not strictly a plantation system. It was only rarely that the

¹ G. Watt, *Pamphlet on Indigo* (1890).

² *Ibid.*

³ Quoted in the *Pamphlet on Indigo*, p. 14.

⁴ There was almost no order kept; and many of the planters kept a band of desperadoes under them to fight neighbouring planters and Zenindars. For an amusing account of 'how one took possession of a factory (indigo) in Bengal in 1830' see M. Wilson. *History of Behar* (1908). This book is full of such incidents of violent fights and exhibits well the entire disregard of the planter for law.

manufacturers of indigo cultivated their own lands by means of hired labour. The usual system was to enter into contracts with tenants of other zemindars or of lands over which the planters themselves had acquired zemindari or talukdari rights, to sow a certain portion of their land with indigo, which was sold to the planter at a certain fixed price.¹ Though the abuses of the system had been long recognized, nothing had been done to ameliorate the condition of the peasant. Advances were generally made at the beginning of the agricultural season to the peasant to grow indigo, and many a time they were forced upon him. The ryot when he once took the advances was ruined. The Indigo Commissioners say in their report, 'It matters little whether the ryot took his original advances with reluctance or cheerfulness, the result in either case is the same ; he is never afterwards a free man.'² In view of the large areas under indigo in Bengal and Behar the following extract from the Commissioners' report is enough for condemning entirely the system under which indigo cultivation was carried on. They say, 'Even the most advantageous statement made on favourable suppositions, shows but a slight profit derivable to the ryot from indigo, and it is quite clear from statements as to the production of rice, not to speak of the higher kinds of produce, that indigo as a paying crop must stand very low in the scale.'³

¹ The very small amount of *nij* cultivation, i.e. cultivation under the system of planters growing their own indigo, showed that the planters preferred the peasant to grow indigo for them and to buy it at a fixed price from him. 'Minute of the Lieutenant-Governor of Bengal on the Report of Indigo Commissioners,' 1861.

² *Bengal Indigo Commission Report*, p. 25.

³ *Ibid.*, p. 18. But the general conclusion of the Commissioners and also the Lieutenant-Governor were that the cultivator did not make even a small profit. The planters generally insisted on one-sixteenth of the land of the ryots being under indigo. The loss on this is compared to the following case : 'This is as though a farmer in Great Britain, farming under a long lease 160 acres of land at a rent of two pounds an acre, were, by some sort of pressure, forced to cultivate ten acres, say in flax, which he was compelled to sell to a neighbouring manufacturer at a dead loss of £140 a year.' *Minute of Lieutenant-Governor*, p. 12.

Only one inference can be drawn from this, even apart from the direct evidence of coercion produced before the Commission, and that is that indigo cultivation was carried on on a system which had no connection with the welfare of the peasant. Such was the system of indigo cultivation and such it remained. The progress achieved in the spread of indigo cultivation in 1860 was not exceeded during the next twenty years. By now, the indigo industry had grown to almost the maximum of its capacity and henceforth it remained almost stationary.

The tea industry in India began much later than indigo. The indigenous tea plant growing in a wild condition in Assam was first discovered about 1820. The attention of the East India Company was directed towards it, and after some enquiries an experimental garden was started by the Company in 1835. After working it for five years the East India Company made it over to the Assam Company—the first Indian tea company. The progress during the next twelve years was almost nil. In 1852 a private garden was started and then the number of gardens began to increase. 'It may be said, however, that the foundations of the present tea industry were laid between 1856 and 1859.'¹ From the latter date the rate of growth was, indeed, amazing, both in the number of estates and the outturn of tea. The following figures give the details for Assam which, at this time, was by far the most important area of tea production² in India.

Year	No. of estates under distinct proprietors	Area under cultivation (acres)	Outturn of tea in lbs.
1850	1	1,876	216,000
1853	10	2,425	366,700
1859	48	7,599	1,205,689
1869	260	25,174	4,714,769
1871	295	31,303	6,251,143

¹ *Note on the Tea Industry in Bengal*, by Mr. Edgar (1873), p. 7 (included in the Papers regarding the tea industry in Bengal).

² Memorandum by Mr. Campbell on Tea in Assam. (Papers regarding the tea industry in Bengal, 1873, p. 128).

The figures for 1869 do not show clearly the feverish growth which took place in the industry during 1859-66. To understand this phase of the industry, it is necessary to see how the industry was conducted at this time. The grants for tea lands in Assam were mostly granted in the fifties, under the Assam clearance rule of 1854. These, though they did not protect the rights of the wild tribes inhabiting these tracts, provided against grants being recklessly made to speculators, the guarantees being the deposit for making a proper survey and an obligation to bring a certain proportion of land under cultivation in a certain number of years, etc. The local officers at first exercised a good deal of discretion in favour of the rights of the native tribes, and they were careful to see that the applicant had sufficient means to cultivate the land before allowing his application. But in 1859 the speculators, naturally averse to these restraints, brought pressure to bear on the Government. The Government was very anxious to promote the industry and 'the practice of requiring applicants to show that they had means to cultivate the land was forbidden.'¹ A rush of applications followed and an orgy of speculation ensued. The estimates formed by everybody of the future of the tea industry were extremely rosy and, with the relaxation in the rules under which grants of land were made, the way of the speculator became extremely easy. As regards the survey of these grants Mr. Edgar says, 'In most cases the compass ameen (i.e., the Government surveyor) sent in a fancy sketch of an almost imaginary tract of land, which was generally found, when the professional survey went over the ground some years later, to bear very slight resemblance to the real grant. Sometimes the grant had no real existence whatever, sometimes it was far away, in wilds inhabited by wild tribes, who owe merely a nominal allegiance to the Government and who would probably have taken the head of the grantee if he had attempted to take possession.'² But the grantee generally had

¹ Edgar, *op. cit.*, p. 11.

² *Ibid.*, p. 11.

no idea of taking possession ; what he did was to sell the grant to companies financed in London for the purpose of working tea gardens ; and even if the grantee took possession he had no idea of taking the cultivation of tea seriously. The general attitude of the actual planters is reflected by a saying, current amongst them at that time, 'that it was doubtful whether it would ever pay to make tea, but there was no doubt that it paid to make the gardens.'¹ The gardens were not only planted carelessly but 'often was a small garden made of 30 or 40 acres sold to a Company as 150 or 200 acres.'² A most remarkable instance of such practices, given by Mr. Campbell, occurred in the Nowgong district, 'where the Indian manager of a promoter of companies in London was advised by his employer to clear and plant a certain area of waste land for delivery to a company to whom he had just sold it as a tea garden.'³

Such enormous speculation and the hasty way of clearing wild waste and the planting of tea, brought up the question of labour in a very acute form. Up to about 1860 the local labour supply though scanty had been sufficient for the needs of the tea gardens. During the speculation craze the demand for more labour became insistent and coolies had to be imported from Bengal to meet the demand. These coolies were generally imported at this time through the agency of contractors of labour in Calcutta. The price of labour had risen very high and it paid the contractors to get together all kinds and conditions of coolies they could, and send them on to Assam. The method of transportation was extremely imperfect and a large proportion of these coolies died on the journey ; and when they did reach the gardens, their miseries were 'in too many instances cruelly aggravated by the ill-treatment of their employers.'⁴ The coolies were in most cases deceived as to their future prospects and when they reached

¹ Edgar, *op. cit.*, p. 8.

² Campbell (see above), p. 125.

³ *Ibid.*, p. 9.

⁴ Edgar, *op. cit.*, p. 21.

Assam their position was that of virtual serfs, for the time of their contract. If they ran away they could be arrested¹ and brought back and they could even be imprisoned for refusing to work. To this legal coercion were added many illegal practices of the planters, such as flogging.² The position of the cooly was worst during these years of speculation but it tended to improve slightly in later years.

The enormous speculation in gardens brought about a sudden reaction in 1866; all tea property depreciated and all the 'bubble' concerns failed. There was a great deal of distress among young men who had come out to manage tea gardens. The depression in the trade was very severe and lasted till 1869, when matters began to improve, and by 1871 the tea industry was placed on a firm basis. After this the progress of the industry was steady for more than two decades. The cultivation spread to other parts of the country such as Punjab (Kangra) and the Nilgiris and the industry, now on a sound basis, prospered greatly.

Coffee was first introduced into India by the Moor traders in the seventeenth century, and its cultivation was undertaken in many parts of South India.³ It did not attain importance, however, till its production was undertaken by European planters. The first coffee garden was planted by a European in 1840; the industry thus started did not, however, flourish till 1860, when causes, such as the declension in coffee cultivation in other countries, helped to increase the extent of the industry rapidly. The compiler of the *Mysore Gazetteer* in reviewing the growth of the industry in the Kadur

¹ Powers were given to planters by the Act of 1865 to arrest runaway coolies from their estates.

² The usual methods of recruiting labour, afterwards, were through contractors; or through a selected employee (called a garden 'sardar'), sent by individual employers to his home to get labour directly for the garden. The evils of this system are brought out well in the *Report of the Committee on Labour Supply in Tea and Coal Industry* (1896).

³ See article on Coffee. Watt, *Dict. of Econ. Products.*

district remarks, 'Since 1860 estates have sprung up between these points with such rapidity, that European planters are settled in almost a continuous chain of estates from the south-west of Shimoga to the southern-most limits of Manjarabad, not to mention Coorg and Wynnaad beyond.'¹ During the first decade after 1860 alone the exports of coffee increased nearly ten-fold and the same rate of increase continued till 1879. From 1860 to 1879 was a period of continuous and uninterrupted progress and prosperity for the coffee industry. But already in 1875 the borer disease was creating havoc among the plantations and it increased in its intensity in 1879. This was the beginning of the severe check which the industry suffered in the next decade.

Labour for working these plantations was imported from the neighbouring districts. A good deal of this labour was temporary and consisted of agriculturists who came in when the agricultural operations for the season were over. Here also there was an Act giving the planters control over their labour, but it was not very stringent. The labour force in this industry was not far removed from its home, nor were the districts in which the industry was conducted unhealthy and, therefore, the condition of labour was much better than that obtaining in the tea industry.

With the introduction of the investment of European capital in India, a new factor in its economic development was introduced. Hitherto the Europeans had been content with their share in the commerce of India. They were the carriers of India's foreign trade, but had as yet taken little direct share in the growth of Indian industry. Now, with the growth of plantations and the jute industry, a new source for the finance and business management of Indian industries became available. This factor, which began to be prominent after the middle of the nineteenth century, was destined to play a very important part in the industrial progress of India.

¹ L. Rice, *Mysore Gazetteer*, vol. ii, Kadur District, p. 375. (1897).

SECTION II

The Factory

The factory industry, which is the form of industry which took the place of handicrafts during the nineteenth century almost everywhere, also finds its beginnings in India during this period. Attempts had been made for a considerable time to introduce the factory system in many industries, notably by Europeans. Some of them had at least a temporary success. For example reeling machinery had been introduced in silk filatures by the East India Company and the industry had been for some time quite prosperous.¹ But most of the other pioneering attempts had met with decided failure. Thus before the fifties there was—if we exclude the indigo factories—an almost entire lack of factory industry in India. It was during the fifties that the two industries which have always been the foremost among modern Indian industries were started.

The cotton industry, as "being the more important, may be considered first. The company which built the first cotton mill in India was the Bombay Spinning and Weaving Company which was formed about 1851; but the mill does not appear to have been in working order till 1854.² The progress of the industry was naturally very slow at first and by 1861 only a dozen mills were in existence. The first mill was built very near Bombay though not on Bombay island itself, and the industry continued to grow round Bombay. The decade 1860-70 was not very favourable to the growth of the mill industry. One of the chief unsatisfactory features was the high price of raw cotton, on account of the American Civil War. This high price of cotton hit both the hand-loom industry and the young mill industry of India. The other reason was a severe trade depression in Bombay which followed the enormous cotton boom. This cotton

¹ The Serampore paper mills which were also built in the twenties continued to prosper for many decades.

² See article in Watt, *Dict. of Econ. Products.*

boom has already been noticed as marking the advent of a new economic era in India. Its aftermath was also typical of the new conditions that were being introduced. The trade crisis, which followed the reckless floating of companies for all possible and impossible purposes and the resulting collapse of all credit, was the first of its kind in India.¹ It might be noted here that this depression in Western India coincided, in point of time, with the Assam tea trade depression. The collapse of credit in Bombay in 1865 was indeed so complete that normal conditions were not restored till 1871. The result was that there were only eighteen cotton mills in the Bombay Presidency and two in Bengal in 1872-73. The crisis, however, had one good effect for the cotton mill industry. It demonstrated the impracticability of the numerous schemes that had been launched during the boom period and also showed that the cotton industry was the only stable and profitable industry. Thus as soon as trade confidence was restored there was a very great increase in the number of mills. The increase was specially marked in the year 1874-75. In 1874 the number of mills in the Bombay Presidency was nineteen, in 1875 it had risen to thirty-six, to thirty-nine in 1876 and forty-two in 1878.² The increase in the industry during this decade, especially after the effects on trade of the Franco-German War had passed away, was very considerable and it now definitely took the position of the most important factory industry in India. The extent of the industry in 1879 was—

—	Mills	Spindles	Looms	Persons employed
1879	56	1,453,000	13,000	43,000

¹ D. E. Wacha, *A Financial Chapter in the History of Bombay 1910.*

² The statistics are taken from the evidence before the Bombay and Lancashire Cotton Spinning Enquiry (1888).

Of these mills nearly three-fourths were situated in the Bombay Presidency and more than half the total on Bombay island itself. The number of looms as compared with those of the spindles was very small and, indeed, many of the mills were only spinning mills. This predominance of the production of yarn continued to be an important feature of the industry for a very long time.

Leaving aside the spinning and weaving industry, quite a considerable number of persons were employed in another cotton industry—the ginning and pressing factories.¹ Till the sixties most of the cotton sent to the ports from the interior of the country was unpressed and a few presses were established in the more important ports like Bombay. But the impetus given to cotton cultivation by the American War and the rapid growth of communications had the effect of introducing the use of steam presses, and later on of steam gins, in the cotton tracts themselves. This introduction was not very rapid, and Mr. Rivett-Carnac mentions that till 1867 presses were but little used in the Central Provinces.² It was only after 1867 that their number began rapidly to increase in that province. Most of the cotton was, till then, sent to Bombay unpressed. Once introduced, the progress of gins and presses was rapid and by 1880 only a small quantity of cotton was sent unpressed to the ports out of the cotton tracts. This industry, though it employed considerable numbers and gave a very much needed occupation to one class of agricultural labourers in the country, was not one of very great importance in the industrial development of India. For, firstly, the industry was only a seasonal one and secondly, it did not convert raw produce into a manufactured article, but only helped towards the easy export of the raw produce.

Next in importance to the cotton industry comes the jute industry. The trade in jute had been important since the early days of the East India Company, the purposes

¹ Pressing and ginning are usually done in the same factory in India.

² See above *Report* 1868-69, p. 91.

for which it was chiefly used being the manufacture of cordage, ropes, etc. Till about 1830 the manufacture of gunny-bags and jute cloth was the monopoly of the Bengal hand-loom weaver.¹ After this date, an active manufacturing industry having sprung up at Dundee, it was found more profitable to export raw jute than to produce gunnies on the hand-loom. Thus the years following 1830 saw a rapid decline in the jute hand-loom industry of Bengal. The importance of jute as a material for cordages, ropes, sacking, etc., was also growing rapidly and more and more land was being placed under jute annually. The rise in the importance of jute was greatly helped by the Crimean War, which for a time cut off the supplies of Russian hemp, a powerful competitor of jute.² The manufacture of jute in India with the help of machinery was not started in India till 1854. In that year a jute mill was established at Serampore by one Mr. Ackland. From 1854 to 1863-64 only one more mill was built but from 1863-64 onwards the growth of the industry was fairly rapid. Jute was a monopoly of India and in this the Bengal industry had a strong advantage. Hitherto Dundee, which had successfully killed the hand-loom industry, controlled the entire market. But the Bengal industry soon established its position. Of this Mr. O'Connor, in 1876, remarks, 'While Dundee had only hand-woven jute stuffs made in India to compete with, that city had practically the monopoly of the world's supply; but the development of the manufacturing industry here, in mills furnished with the best mechanical appliances moved by steam, has had the inevitable result of shutting Dundee out to a great extent from the Asiatic and Australian markets, and even from a part of the American market.'³ In 1882 there were in India twenty jute mills employing nearly 20,000 people. Of these mills eighteen were in Bengal and seventeen in the immediate

¹ Article on Jute in Watt, *Dict. Econ. Products.*

² Report on the Cultivation of and Trade in Jute in Bengal, by H. C. Kerr, 1874.

³ Account of the Trade and Navigation of British India 1875-76: J. E. O'Connor's Memorandum, p. 31.

vicinity of Calcutta. The industry was even more localized round Calcutta than was the cotton industry round Bombay. The first jute mill was started by a European and the industry remained always mainly in the hands of Europeans. With the growth of the export trade in raw jute, the jute pressing industry had also begun to acquire importance in Bengal.

Apart from these factory industries modern methods had begun to be used in the mining of coal also. At this date coal was the only mineral product produced in considerable quantities in India. 'The commencement of the industry appears to date back to 1820 when a mine was opened in the Raniganj district in Bengal. For twenty years after this no new mine was opened and then only three mines were opened down to 1854. In that year the commencement of the East Indian Railway line, which was laid to run through the coal bearing regions of the Damuda basin, gave an impetus to the mining industry and new pits were opened in large numbers.'¹ The progress was steady and this region, i.e. Raniganj and neighbouring districts, contained in 1879-80 altogether fifty-six mines at work. It was natural that with the building of railways in India coal mining should have received an impetus. Not only because before this there was very little demand for coal for industrial purposes, but also because it was impossible to transport coal from these districts cheaply enough without the help of railways. The railways themselves needed enormous amounts of fuel and when, with the rapid disappearance of the forests which lined the first railway lines, wood became dearer and dearer, the demand for coal became more insistent. This demand was the cause of an active import trade in coal from the United Kingdom to India.

Up to the year 1870 the Raniganj coal-fields were the only ones to be exploited. These supplied coal to the East Indian Railway and sometimes coal from these fields was carried even to the Punjab, but the railway systems of the West and South of India were entirely

¹ O'Connor, *Review of the Trade of India*, 1878-79, p. 22.

without access to these supplies. In 1870 the Mohpani deposits in the Central Provinces were opened up but the quantity produced there was insignificant, and they never became very important. In the same year coal was mined in the Karharbari district of Bengal, which became quite important in a few years' time. In 1874-75 another coalfield, that of Warora in the Central Provinces, was opened up. This helped partly to supply the Great Indian Peninsula Railway with fuel, but even so the Bengal coal-fields remained by far the most important, and the needs of Western India Railway systems and industries were not at all adequately provided for. The opening of the Suez Canal temporarily depressed the Indian coal industry. The imports after 1870, i.e. the date of the opening of the Canal, did not rise greatly, but the Indian production of coal seems to have suffered a temporary set-back. For the production of coal, which was in 1869 approximately 467,000 tons, went down considerably in the next three years and did not again approach the old level till 1875-76. From this date onwards it continued steadily to progress.¹ But, though the production of Indian coal was increasing, the import of foreign coal was also increasing steadily. This was chiefly on account of the rapid extension of railways in India and on account of the fact that many of these railway systems were unfavourably situated as regards the Indian coal-fields. Seventy per cent of the coal imports into India were taken up by the Bombay Presidency. Thus in spite of the growth of coal-producing activity, India in 1880 was still importing about 600,000 tons of coal annually, while there was almost no export of coal from India. The methods used in the industry varied greatly. For while in the larger concerns machinery was largely introduced even at this early date, in most of the smaller pits very little machinery was used; the number of the latter class of concerns was very much larger than of the former class. The coal industry in 1880 gave employment to about 20,000 people.

¹ Sir V. Ball, *Economic Geology of India*, 1881.

These three industries—the cotton and jute manufactures and the mining of coal—were the only important industries in India in 1880. It will be seen from the number of people engaged in them how small even these industries were. But though these were the only industries which had grown by 1880, spasmodic attempts had been made to establish the factory system in many industries, which met with a varying degree of success. For example, in 1869 a beginning was made in the direction of producing leather manufactures by modern methods, when the Government established a factory for supplying leather goods to the army. Among the many other attempts made might be mentioned the various attempts towards establishing a glass factory in the North-Western Provinces and the earlier attempts to establish an iron industry in the Madras Presidency. An account of these attempts is unnecessary, for the large majority of them bore no fruit.

There was an interesting industry in India at this time which has some claims to be called a modern industry. This was the Madras tanning industry. The industry owed its origin to one Charles De Susa who, about 1845, introduced certain improvements in the methods used in tanning in India.¹ This was in Madras City and slowly these improvements spread to the other important towns of the Madras Presidency. But the improvements never spread beyond this Presidency. They were adopted by a large number of tanners and an export trade in Indian tanned hides and skins grew up. At first the trade was carried on with the United Kingdom only, but after the Franco-German war Germany became very active in the trade and this, combined with the repeal of the 3 per cent duty on these exports in 1875 and the extension of railways, which opened up the country supplies of hides and skins to the Madras tanner, made the industry exceedingly prosperous; and by 1880 Madras was exporting a large number of tanned and half-tanned hides and

¹ A. Chatterton, *Monograph on Tanning and Working in Leather in the Madras Presidency* (1904).

skins to foreign countries. This industry showed an intermediate stage in the development of Indian industry. The Madras tanning industry showed the effect of a slight adaptation of improved methods in industry, combined with cheap raw materials and cheap labour. The independent artisan disappears from this branch of the trade and the small capitalist—in the person of the export trader in most cases—steps in. The unit of the industry is increased ; it became a small workshop with an average of about five to seven workers. The industry had to be a purely export industry ; for the village leather-worker tanned the leather that he wanted himself or got it tanned from the village tanner ; and the urban demand for leather goods was not large enough to support an industry of this kind. But it is to be remembered that the improvements adopted in the industry were only slight. They were just sufficient to produce a leather somewhat superior to the ordinary Indian village tanned leather, and to make it fit for export. The industry grew only because it had two distinct advantages, those of cheap labour and cheap raw materials, and the loss of even one of these was enough to arrest this growth. It is impossible to estimate the number of people employed in this industry, but it could not have been very large.

The above account of the few new industries in India will conclusively show that the extent of these in 1880 was exceedingly small ; and that, while the process of driving out people from their old crafts was proceeding quickly, the growth of new industries to absorb the people thus displaced was in no sense proportionate.

CHAPTER V

THE AGRICULTURIST (1880-95)

THE village in India is *the* unit of agriculture and, therefore, the general constitution of the village is of great importance to us. India has always been a land of small holdings, whether worked by peasant proprietors or cultivating tenants. The rights that the peasant possessed over his land were dependent on the nature of his tenure. The variety of the tenures in India is rather complex, but there are two broad divisions among them. These are the 'Ryatwari' and the Landlord tenures. The great majority of the villages in India came under either of these two divisions.¹ In the Ryatwari tracts there was no single ownership over the whole village. The village consisted of a number of independent peasant proprietors. In the Landlord village, on the other hand, it was owned by a single landlord or a group of co-sharing landlords. Where a single landlord owned the village, all the cultivators were his tenants. In the co-sharing landlord village the practice differed; in some, the whole of the cultivation was carried on jointly and there was no definite division in different plots of the different

¹ The most important group, outside these, was the 'Malguzari' tenure of the Central Provinces.

co-sharers; in others, such a definite division of plots existed. Again sometimes the joint landlords with their families worked the whole village, but sometimes, also, they admitted cultivating tenants in the village. Of these different systems the 'Ryatwari' tenure predominated in the south, the single landlord system in Bengal, while the co-sharer villages were mostly to be found in the N.W. Provinces and Punjab.¹

These different tenures did not make a great deal of difference in the internal constitution of the village. As regards the village artisans in the landlord village, they owed special duties to the landlord, but otherwise their position was not greatly different from that of the corresponding class in the Ryatwari village. The common bond holding together the Ryatwari village was the power of the headman and the presence of common artisans paid by the village, while in the landlord village it was the single or group ownership. It is to be noticed that in the cultivated area of the village there was no communal property; each cultivator had his own holding and was generally free to manage it in his own way.²

Of course, in the first half of the nineteenth century the nature of the cultivation was dictated by the self-sufficient character of the village. The bulk of the produce had to be the food grains, consumed in the village, and such crops as oil-seeds, cotton, etc., grown for local requirements. There were only two important kinds of agricultural produce which, on account of their nature, could not be grown generally all over India. They had thus to be grown to be sent out of the village. These were cotton and sugarcane. The trade even in

¹ B. H. Baden-Powell, *A Short Account of Land Revenue and its Administration in British India* (1913).

² Baden-Powell doubts whether even in an undivided joint-village there was any joint cultivation under the control of the 'Panchayet'. He thinks that, even here, there was a *de facto* division of land and the cultivation carried on separately by the different co-sharers. Baden-Powell, *Indian Village Community*, p. 25 (1898).

these was of a limited extent and the area it covered was also limited. Thus cotton was extensively grown all over India in small patches round the village, and the only regular stream of commerce in this article was the supply, to Bengal, of cotton from Nagpore and Berar *via* Mirzapore. In Bengal even, cotton of a fine quality was grown. For it is well-known that the yarn for Dacca Muslins was spun out of cotton grown round Dacca itself. Sugarcane, again, was a crop which required intensive cultivation and a regularity and abundance of water supply, which were not to be had everywhere. Sugar-cane cultivation was, therefore, localized a great deal. Being a very important commodity, *gur* (Indian raw sugar) was therefore, next to cotton, perhaps the most important trading item in Indian agricultural produce. But the extent of such cultivation was limited. Royle has been quoted above¹ to show that in the most favoured cotton tracts as much as one-fourth of the land cultivated was under cotton. But it is doubtful how far this estimate is correct. In 1867 Rivett-Carnac's statistics show that in Berar—one of the most favoured cotton tracts of India—only 27 per cent of the cultivated land was under cotton; and this just at the time of the great extension of cotton cultivation. Even one-fourth, for a specialized crop, is not a great deal, especially when we consider that the major portion of the crop did not go far out of the village. A restriction in cultivation of this nature was a natural result of the self-sufficient character of the village.

We have described some of the remarkable results that the spread of communications and the creation of a market had on the cotton cultivation of India during the sixties. But these effects were specially brought into relief during the period under review. The Lancashire cotton famine was temporary; the Suez Canal, which was an important factor in the increase of India's export trade, was only opened in 1869; just after came the Franco-German War and next the famines.

¹ See above, chap. ii.

The decade 1870-80 was thus not normal enough to show the effects of the new conditions fully. But even in this decade, the rise in the export of wheat showed the general tendency. The famines temporarily stopped the growth of this trade, and it was during the years 1880-95 that the phenomenal expansion in the export of Indian raw produce took place. This could happen only because, during this period, India was singularly free from any famines of a serious nature. There were local scarcities and failures of rainfall, but there was no widespread famine such as the one in 1876-78 and the two that followed in 1895.

Though an immunity from serious famine cannot be said to imply necessarily a period of prosperity, it at least means for the mass of the population a period free from severe distress. These fifteen years, taken as a whole, were for the agriculturist a period of comparative prosperity. In certain parts this spell of prosperity was broken by occasional local scarcities. For example in 1884-85 there was a scarcity in Bengal, an almost complete failure of the rice crop of Chhattisgarh in 1886 and again in Orissa in 1889. The rains between 1890-95 were irregular over some parts of the Madras Presidency and the Central Provinces. But in spite of these the period was for the cultivator generally speaking favourable.

By the cultivator is here meant the peasant proprietor or the landowner, who was in a position to profit from a series of good harvests and from an appreciation of the value of his produce. For the cultivator who was hopelessly in debt, or for one whose plot of land was not large enough to sustain him, these factors did not make any difference. So also to the landless day-labourer this period meant only the assurance of a somewhat continued period of employment. But to the peasant proprietors not hopelessly in debt the immunity from famine meant a certain relief, and the chance of slightly bettering their condition.

The growing demand for Indian agricultural produce is also an important factor. For this resulted in many

cases in a rise of prices of the industrial crops.¹ Not only did the export trade rise, but also the internal trade in agricultural produce was rising rapidly. This enabled a better specialization of crop than had hitherto been possible. This is reflected in such movements as the adoption by Berar of cotton cultivation more and more, until it had to import a substantial portion of its food-supply. Sugarcane was, for example, one of the most popular crops at this time, although there was practically no export trade in sugar.

The best standards of agricultural prosperity are, perhaps, the area under cultivation, the nature of the crops grown and the extent of the live-stock of the country. In India's case any measurement, by any of these standards, however approximate, is impossible. The agricultural statistics are extremely defective; the first regular compilation of them was made for the Famine Commission of 1880 and was afterwards regularly continued. But Mr. Baine's note makes it very clear

¹ The rise of export prices was not general. Prices of some articles, such as cotton and wheat, went down while prices of jute, rice and linseed increased a great deal. It will be observed that in the former India was not an important factor in the world market, and here the prices went down; while in the latter group India was in each case the most important individual supplier to the world market; in this group there was a decided increase in prices.

STATISTICS OF PRICES—EXPORT WHOLESALE

Prices of 1873 are taken to represent 100

Cotton (Broach)	Rice (Ballam)	Rice (Ngastain)	Wheat (Delhi)	Jute (Picked)	Linseed (Bold)
1883 78	109	129	87	96	85
1889 93	144	142	95	192	104
1895 70	147	122	82	175	131

how defective these were.¹ For the important province of Bengal, there were no reliable estimates ever published before 1897-98.

There are general indications that the area under cultivation was increasing. This increase was due to an extension of irrigation facilities and to new lands being brought under the plough. There were in India at this time no tracts of virgin unexplored soil; most of the new tracts that were now broken into cultivation being waste, or grazing areas, or cleared forest lands. These were generally inferior to the lands already under cultivation, and this movement might be taken as a result of the growth of population in India. There is, at the same time, nothing to show that the yield per acre of the land under cultivation in India was increasing.

There are again no indications that the nature of the crops grown was undergoing any radical change. The food-grains retained the very high proportion in the total. The tendency towards substitution of the better class of food-grains for the inferior ones was marked in the extension of wheat cultivation in Punjab; otherwise there were no changes in the food-grains group. But, with the increase in the area of cultivation there was also a proportionate increase in the area under industrial crops. The crops under which the increases were the greatest were jute, sugarcane, oil-seeds and cotton. It is to be observed that the spread of the cultivation of industrial crops went largely with the spread of irrigation, and as soon as irrigation in any form was introduced in a tract, the more remunerative crops and intensive cultivation followed. The growth in the different industrial crops was very steady, and its importance consisted in showing the effects of improvement of communications on the agriculture of India. All these crops had been grown for a long time in India in small patches round every village, with the food-grains, for home or for local use.

¹ Statement on Agriculture by J. A. Baines, Appendix to the *Moral and Material Progress of India*. Report for 1882-83.

The change that was now coming over India was not so much in an absolute increase in the area under industrial crops. This could not be, because India had to grow her own food-supply, and, with an increasing population, the area under food-grains had also to rise. But the movement was towards a somewhat greater localization of crops. Thus Berar took increasingly to cotton ; the irrigated tracts of the Nira and the Mutha in the Deccan took up sugarcane cultivation and the cultivation of garden crops almost entirely. Such a movement was only made possible by the facilities of transport, which opened a wider market for the industrial crops, and at the same time made the import of food-grains from the neighbouring districts possible.¹

A long period of agricultural prosperity in India also meant an incentive to agricultural improvement. Generally this took the form of digging wells and investing in better cattle. This period was naturally well-suited to the introduction of better kinds of crops and better methods of cultivation. The practice of agriculture in India differed widely from district to district, from village to village, and even in the same village from one caste of cultivators to another. In the best cultivated tracts—such as those mentioned by Dr. Voelckler, Coimbatore, Mahim, North Gujarat—the standard was very high indeed. But even in those tracts where the actual practice was not high, ignorance of the right methods on the part of the cultivators could not always be deduced. In most parts the value of fallowing, of the rotation of crops and of manures was well understood ; and except,

¹ In Central Provinces and Berar we see two indications of this tendency : thus the area under cotton in Berar rose from 27 per cent in 1867 to 45 per cent in 1913 of the total area cropped. On the other hand the area under sugar, which was in the days before the improvement in the means of transport 40,000 acres in the Central Provinces had fallen down to 21,000 during non-famine years during the first decade of this century. The latter phenomenon was, no doubt, due to greater localization in tracts specially suited to sugarcane, e.g. U. P. and Bengal. See C. E. Low, *Hints on Agricultural Economy of the Central Provinces and Berar* (1914.).

perhaps, for the selection of seeds, there was little to be improved upon in the best cultivation. But the practice of all these depended on the circumstances of the cultivator. Thus the scarcity of firewood compelled people to burn their most valuable manure: the pressure on land made them forego the practice of fallowing, and their poverty, which compelled them to sell the whole crop at harvest-time to pay the money-lender's interest and the Government assessments and consequently to buy their seed every year from the money-lender, prevented any careful seed-selection. But the circumstances were not so bad everywhere, and there is no doubt that, side by side with the most developed agricultural methods, were also to be found methods at once slovenly and wasteful.

Thus one of the obvious ways of improving the condition of the agriculturist was an improvement in agricultural methods. It is necessary, therefore, to consider here the policy of the Indian Government towards the agriculture of the country.

In India the policy of the Government has always been an important factor. By 1860 India had been ruled by a foreign Government for a considerable time, and the prestige of the Government was such that the people had formed a habit of always looking to the Government for the initiative in any measure of reform. This peculiar prestige of the Government—especially during the latter half of the nineteenth century—gave it a unique power of influencing the development of India on all sides. This position of the Government was greatly enhanced by two factors. One was the illiteracy of the masses. The peasant class of India, though very quick in grasping the profitableness of a new improvement, were naturally not in a position to start any improvements themselves. The other fact was that the upper classes were at this time going through a process of transition, a rearrangement of ideas and modes of thought, which had for the time being left no accredited leaders of society. In short, society all over India was in the melting-pot, and none but the Government had influence enough to

start any new movement and rely on a considerable following.¹

It might be objected that industrial changes come only through the pressure of economic facts and have nothing to do with the action of Governments. This proposition is certainly in the main true, and ultimately the facts of the economic world have complete power over the nature of industrial changes. But individuals and governments can also influence the course and the rapidity, or otherwise, of these changes. Thus Robert Bakewell and the Norfolk gentry had certainly a substantial share in furthering the cause of agricultural improvement in England and the nature of the Enclosure Acts influenced the course of agricultural revolution. It is merely pointed out here that, on account of the peculiar social conditions obtaining in India in the latter half of the nineteenth century, there was an absence of an influential social class over wide tracts of the country and a lack of cohesion and correspondence, which were essential to any movement of widespread utility. This state of affairs invests with peculiar importance the policy of the Indian Government.

There have been no definite pronouncements on the policy of the Government towards agriculture. But the policy—that is as far as a definite policy existed—can be inferred from the various official publications. The following words of Dr. Birdwood (afterwards Sir George) perhaps bring out most clearly the attitude of the Indian Government towards this question. He says, 'The rapid decay of the manufactures of India invests with the highest importance every attempt to increase the number of its exchangeable products. . . . Our best efforts, therefore, must be directed to counterbalance the decline in manufactures by a proportionate development

¹ In matters agricultural this was intensified by the fact that the new educated middle class which got into touch with the Western scientific ideas was, in the main, urban and professional, and had no influence in rural India; while the landed gentry who could influence agriculture were mostly ignorant of scientific methods.

of the agricultural wealth of the country ; new raw exchangeable products must supply the place of each manufacture, as it in succession fails, if the prosperity of India is to be sustained under the circumstances of her dependent and intimate intercourse with Western civilization.¹

The question of agricultural improvement had received some attention in the days of the East India Company. But the first regular associations which interested themselves in the question, though started by Europeans, were not Governmental bodies. These were the Agric-Horticultural Societies ; the first of these was started by Dr. Carey in Calcutta. Others were afterwards formed at Bombay, Madras and other places. These bodies were generally helped by the Government by small annual grants or free land for experimental purposes. The first direct Governmental institutions started were the Botanical Gardens. These were run by an expert, and sometimes had experimental farms attached to them. It might be said that, down to 1866, these two were the main institutions for introducing agricultural improvements. The aim of everybody in these earlier years was the introduction of new plants and exotics. Certainly in some directions they were extraordinarily successful. Witness the example of the tea industry. In Watt's opinion, 'The prosperous industry of tea-planting in India and Ceylon may be said to have emanated from the Botanical Gardens of Calcutta, and to have obtained direct aid from the Government until private enterprise was prepared to undertake its further development.'² So also the successful introduction of the potato and cinchona may be cited. No doubt a small number of 'useful trees, ornamental shrubs, and valuable crops'³ were introduced in these years. There were also many attempts to improve the staple crops like cotton and

¹ *Moral and Material Progress of India*. Report for 1871-72, p. 27.

² G. Watt, *Memorandum on the Resources of British India* (1896), p. 8.

³ *Ibid.*, p. 8.

indigo. The attempts at the improvement of cotton were very numerous. But the only fairly successful of these attempts was the introduction of an American variety into Dharwar.

No other definite step was taken by the Government till 1870, when an Imperial Department of Agriculture was created. This was only short-lived and was abolished in 1878, because the co-operation of the provincial Governments was not forthcoming. The whole question was taken up by the Famine Commission of 1880, which recommended as a first step the establishment of Departments of Agriculture and also the collection of agricultural statistics. The extent of the improvement already achieved was also reviewed in the report and by many witnesses. It was recognized by many witnesses that the lines on which agricultural improvement in India had been attempted were in a great measure wrong. Some even went to the extent of questioning the possibility of improving Indian agriculture.¹

The other attempt made during the decade 1870-80 was in the direction of the establishment of experimental farms, with a view to prove to the people the advantage of improved methods and appliances and also to experiment on new methods, etc. Unfortunately most of the attempts proved fruitless at the time. The main reason was, 'the universal employment as farm managers of men who had no true agricultural training such as gardeners, unsuccessful planters, or other officials with equal claims for consideration.'² But it was not only that the people who were generally given charge of these farms were inexperienced, but also, whenever even an agricultural expert was brought over from England, he failed, because of his ignorance of Indian conditions and the methods of the Indian cultivator. The effects of this ignorance were disastrous and the

¹ 'Any further attempt at experimental farming and teaching of the ryot is to be deprecated.' Mr. Toynbee (Bengal). *Evidence Before the Famine Commission, 1880.*

² R. Wallace, *India in 1887.*

failure of the farms was necessarily almost complete. This fact had come to be generally recognized by 1880. Mr. Buck (afterwards Sir Edward) said in his evidence before the Famine Commission, 'For one thing in which we can beat the native, he can beat us in a hundred things.' The Collector of Ratnagiri wrote 'The Southern Konkan has nothing to learn from us or America in rice culture.' Mr. Buck in his memorandum draws the conclusion that, before introducing any improvement, a patient attention to the study of its application to Indian conditions was necessary. He also emphasises the desirability of appealing to the verdict of the Indian peasantry. At the same time he points out the absurdity of condemning all attempts at improvement as hopeless. In proving these contentions he puts forward the case of the improved sugar mill of Messrs. Mylne & Thompson, which was already coming widely into use. Messrs. Mylne & Thompson had to make an elaborate study of the wants and the capacity of the Indian peasant before they put their mill on the market; but when such a mill had been devised, it was found that, in spite of the alleged conservatism of the Indian peasant, its use spread very quickly. These propositions (of Mr. Buck) were on the whole acceptable to the Famine Commission. They recommended the immediate establishment of Agricultural Departments. Nothing was done on these findings. In 1889 Dr. Voelckler was appointed to review the whole question. He toured India and brought out his valuable report in 1893; yet, by the end of the century, nothing had been attempted. The mere establishment of the Agricultural Departments was no solution to the problem, and the want of experts was everywhere felt. The work of the experimental farms was continued, its value depending entirely on the individual superintendent.

The introduction of some new staples, and, in a few cases, of slightly improved machinery, had been the only achievements of Government in this direction. Government had also tried to improve breeds of cattle and horses by organizing agricultural shows and keeping

studs. These attempts had met with no success, because they were desultory and ill-directed.

Apart from spreading the knowledge of better methods and experimenting on new products, etc., there was a very old method of encouraging agricultural improvement which had been practised by all Governments in India. This method was to remedy the defect of credit in the peasant's economy and enable him to make improvements on his land by giving him loans on easy terms for that purpose. These were called the 'Takavi' allowances. The British Government in India gave these advances under terms laid down by the Land Improvements Act (1883) and the Agriculturists' Loans Act (1884). These were small loans given by the Government at a reduced rate of interest, to be paid in instalments with the land revenue. The trend of the evidence before the Famine Commission clearly showed that they were not taken advantage of on a wide scale. There were many objections to the way in which the Acts were administered. To begin with the success of the system depended 'upon the energy and the interest of a single individual, this being as a rule the Collector or the Deputy Commissioner of the district.'¹ Therefore in many cases the knowledge even of the terms of the Act was not current in the district. A great deal also depended on getting the advances in proper time, and this with the 'Takavi' loans depended entirely on the character of the official in charge ; it is not surprising, therefore, that the peasant preferred to go to the local money-lender, from whom he was at least sure of getting the money promptly. Another defect in the system of granting these advances was the great rigidity in the administration of the Act in the matter of collection, not only of interest, but also of the capital.² The period allowed for the repayment of the loan was in many cases not long enough. Thus though the interest on these

¹ Dr. Voelckler, *Report on the Improvement of Agriculture in India*, p. 85.

² *Report of the Indian Irrigation Commission* (1904), chap vi.

loans was much lower than that charged by the money-lenders, they were not very successful. In those tracts where an energetic officer administered the Act on a liberal basis and spread the knowledge of the facilities afforded by the Government, they generally became very popular and were largely taken advantage of, especially for well-digging.

The scope of Government action was, of course, limited. The convincing demonstration of the superiority of a heavy iron plough to a cultivator whose bullocks were half-fed and utterly unfit to drag anything heavier than the ordinary wooden plough, was not of much practical value. The same limitation was apparent everywhere in the introduction of manures or of water-pumps. The root causes of the poverty of the peasant, the smallness of his holding, could not be remedied by demonstration farms and improved appliances. But there was another limitation. This was the action of the trade. Dr. Voelckler shows how the action of the wheat trade in London weighed against clean wheat being brought into the market. Even more striking instance is the deterioration in the quality of Indian cotton.¹ The limits

¹ This movement had gone very far and resulted in a wholesale ousting of superior varieties by inferior ones, e.g. in Khandesh, Central Provinces and Berar. This was for the most part due to the fact that the inferior varieties matured more quickly and were hardier; while for the trouble and expense of producing the better grade of cotton the cultivator was not likely to be rewarded adequately. The Indian cotton mills industry had adopted the course of producing inferior counts of yarn and coarse manufactures; there was thus no home demand for the finer cottons, and the difference in price was negligible. The tendency was accentuated by the introduction of steam gins. The use of hand-gins even for seed selection had ceased and the cultivator found it easier to buy his seed from the nearest gin. In the gin all sorts and varieties of cottons were mixed up together, 'the specialization of centuries of natural selection was thus being rapidly effaced by this new phase of commercial production.'*

* G. Watt, *Commercial Products of India*, (1908) Article on Cotton.

See also, *Cotton Improvement in India*, Correspondence, etc., (Parliamentary paper) especially the Memorandum by Mr. Molisson.

of Government action are clearly stated by Mr. Jones (Berar) in his evidence before the Famine Commission (1880). He says, 'I am not sanguine regarding the effects of model farms. The first cotton merchant who offered a fraction of an anna more for clean than dirty cotton, did more for Wardha cotton than I, with all the resources of the Government at my back, ever accomplished.' But if the trade could influence thus for good, it could have a bad effect also. These were the limitations on Government action. The Government could do a great deal in the way of improved methods, better seed-selection, etc. But for these to spread and be successful, a patient and an exhaustive study of the wants of the peasant and the means at his disposal was necessary.

CHAPTER VI

GROWTH OF INDUSTRY (1880-95)

THE fifteen years from 1880 to 1895 were for the agriculturist on the whole favourable. The handicrafts had continued to decrease during this period and the only forms of industry that showed any vitality were the factory and the plantation industry. The extent of the former was extremely small and its nature restricted in 1880. The Indian factory industry at this time was almost exclusively composed of the two textile industries, cotton and jute. It might be stated at the outset that during the fifteen years under review no great progress was made in any new industry. A few new industries were started, but none had achieved any importance. Whatever progress there was, was made in the already established industries like cotton and jute.

The cotton industry made very good progress during these fifteen years.

COTTON MILLS, 1880-95

—	1879-80	1884-85	1888-90	1894-95
Number of mills ...	58	81	114	144
Persons employed ...	39,537	61,596	99,224	139,578
Looms ...	13,307	16,455	22,078	34,161
Spindles ...	1,407,830	2,037,055	2,934,637	3,711,669

This table gives some idea of the progress of the industry. The rate of growth was not very rapid but it was remarkably steady and continuous; and there is

an entire absence of any violent fluctuations throughout the period.

The rate of growth became specially prominent after 1885. Of the growth during the whole period Mr. Graham Clarke writes, 'The year 1885 seems to have marked a turning point in the upward climb, and with the great improvements in cotton mill machinery introduced into India about that time, such as ring-spinning and the revolving top-flat card, the mills began to make finer yarns and cloth of more variety and to reach out after new markets for their goods. In the five years from 1885 to 1890 there were added fifty mills which marks the time of greatest expansion. There was a fairly good business and healthy expansion up to about 1897.'¹

Spinning is still a much more prominent factor in the industry than weaving. But it will be observed that though during the first ten years the number of spindles grew at a greater rate than the looms, during the last five years an exactly opposite tendency was in operation. Now there is a distinct tendency for looms to grow apace. It was only natural that this should be so. For during the young days of the industry competition with Lancashire in coarse yarns was the most profitable and most likely to succeed; and then the spinning shed was the really important section of the factory. Having grown steadily for thirty years, the Bombay industry had now succeeded in practically killing the home hand-spinning industry and had captured the entire Indian market for coarse yarns. But this was not all; the eighties had seen a remarkable rise in the exports of Indian twist and yarn, the exports being chiefly sent to China and Japan. The success of the Indian twist and yarn was so phenomenal that the Manchester Chamber of Commerce conducted in 1887 an enquiry into the causes of the growth of the Bombay trade. They came to the conclusion that the reasons for this

¹ W. A. Graham Clarke, *Cotton Fabrics in British India and the Philippines*, 1907, p. 14.

success were chiefly 'geographical'.¹ Whatever the reasons, there is no doubt that these exports grew rapidly and continuously during this decade.

—	1879-80	1885-6	1890-91
Exports of Indian twist and yarn in lbs.	26,704,716	79,324,431	170,518,804

But this growth could not go on indefinitely. The capacity of these markets was not unlimited. Moreover about 1890 a change was coming over the Indian trade with Japan. Japan had been all this time slowly building up a mill industry itself and so it now ceased buying Indian twist and yarn and began to buy Indian raw cotton instead. Therefore the Indian exports of Indian twist and yarn decreased slightly instead of increasing during the five years after 1890. The Bombay industrialists had, perforce, to turn their attention from spindles to something else. Though the export trade in twist and yarn was checked, the prosperity of the industry was unimpaired.

In the localization of the industry there was very little change. The industry was chiefly centred in the Bombay Presidency and, within the Presidency, in the two cities of Bombay and Ahmedabad. There was quite a large growth of mills in India, but outside Bombay and Ahmedabad they were all scattered over the face of the country and as yet there was no big cotton industry centre outside these two cities. Of the 144 mills in India in 1894-95, 100 were in the Bombay Presidency; out of these, again, sixty-seven in Bombay city and island.

The progress in the other textile industry—jute manufacture—was almost as rapid as in the cotton industry. This growth was reflected in the immense increase in the exports of jute manufacture from India. The jute

¹ *Report of the Bombay and Lancashire Spinning Inquiry, 1888.*

industry was not able to rely on the home market to the same extent as the cotton industry and there was a close relation between the growth of this industry and the progress of the exports of jute manufactures. The progress in the jute industry cannot be said to have been as continuous. Jute, far more than cotton, is a fluctuating crop, and the demand for the products of the industry is perhaps not so stable as the demand for cotton goods. But the jute manufacturers were a highly organized body and the periods of depression or slackening of demand were generally met with by an all-round short time. Another notable fact in connection with the growth of this industry was that the rise in the number of separate mills or companies was remarkably small as compared with the growth in output or the number of hands employed. A glance at the table regarding the cotton mills would show that the number of hands employed and the number of looms and spindles rose during the period in a nearly equal ratio ; but in the jute industry the case was different. This indicates that the expansion of the industry took the form of the extension or enlargement of the existing concerns rather than an increase in their number. The average unit of production, then, in this industry increased much more than in the cotton industry.

JUTE MILLS, 1880-95

—	1879-80	1884-85	1889-90	1894-95
Number of mills ...	22	24	27	29
Persons employed ...	27,494	51,902	62,739	75,157
No. of looms ...	4,946	6,926	8,204	10,048
No. of spindles ...	70,840	131,740	164,245	201,217

Out of these twenty-nine mills twenty-six (and these all the larger) were in Bengal centred round Calcutta.

Next comes the coal-mining industry. In 1880 it was very small and the wants of Indian railways and manufactures were very inadequately provided for. The progress of this industry up to 1886 is very slow, but after this date the industry began to progress rather rapidly. The growth of this industry depended intimately on the extension of railways in India and on the freights.

COAL MINING, 1880-95

—	1885	1890	1893	1894
Output (tons) ...	1,294,221	2,168,521	2,562,001	2,800,652
No. of persons employed	22,745	32,971	37,679	43,197
No. of collieries ...	68	82	96	123

The growth was most remarkable during the year 1893-94. This year indeed was the beginning of the rapid progress in mining activity in India that we find taking place during the next twenty years. Even up to 1893, with all the progress made during this period, the coal-mining industry of India was a very small one. Of the total mineral production of India the gold production from the Kolar Mines still exceeded the coal produced in value.

One of the greatest handicaps to a proper extension of the coal industry of India was the question of freights. The railway charges were high. The Bengal coalfields, which produced about three-quarters of the total Indian production, were situated far inland; and even the maritime freights were onerous at this time. This made it impossible for the Bengal coal-fields to supply any coal to the west and south of India. The chief advance made during this period was the capture of the Burma market, and the complete ousting of foreign coal from Eastern India. With the extension of the manufacturing

industry of Bombay, the imports of coal were steadily rising. On the whole, though the growth was not large, there were clear signs at the end of the period that not only had Indian coal extended greatly in use on the railways, but its use in the manufacturing industry was also becoming more prominent. The exports of coal from India also began during this period. They rose from 26,336 tons in 1890-91 to 53,665 tons in 1894-95; but this was just a beginning, and the actual quantity was insignificant as compared with the more than 800,000 tons annually imported into India. Though the extent of the coal industry was not large in 1895, it then gave promise of rapid future growth.

These three industries—the cotton and jute manufacture and the coal industry—still remained the only considerable industries that India possessed. In the financial and commercial statistics of India two other industries—the woollen and the paper mills—are given under separate returns as big industries. The extent of these industries was very small. For in 1895 there were only six woollen mills and eight paper mills in India, employing in all just about 3,000 and 3,500 people respectively. The general state of Indian industry can be gauged from the fact that even these were, after cotton and jute, the biggest factory industries in India.

Of the plantation industries, tea had by now assumed very great importance. It was one which during the last thirty years of the nineteenth century enjoyed a period of continued prosperity and growth. But except for this there was nothing remarkable in its growth during this period. The area under tea, which was in 1885 284,000 acres, rose to 433,113 acres in 1896. Assam, i.e. the Brahmaputra and the Sûrma valleys, still occupied the first position with 67.4 per cent of the total area in 1896. Bengal followed (chiefly Darjeeling and Jalpaiguri) with 24.3 per cent. But there was also a growth of the industry elsewhere—on the Himalayan slopes in North-West Provinces (now United Provinces) and Punjab and in the Nilgiris in the south. The other noticeable feature was that the production of tea was increasing in

a greater proportion than the growth in the area under cultivation—a result largely due to better methods of cultivation and increased use of machinery in the manufacturing processes. The condition of labourers in the industry had slightly improved, but the evils of the system of recruiting still remained and the Kumar Dakhineswar Mallia—a member of the Tea and Coal Labour Commission—denounced the system in 1896 as a 'vile pest to society'.¹

The cultivation of coffee was almost wholly confined to Mysore, Coorg, and the Nilgiri and Malabar districts of the Madras Presidency. Till about 1879 the industry was fairly prosperous 'but during the ten years from 1879 to 1888, depressed prices combined with the havoc wrought by the borer and the leaf disease greatly discouraged coffee planting in India and Ceylon and the prospect of the industry seemed so forlorn that both in Ceylon and India much coffee land was placed under tea'.² The depressed prices were due to the dominant position of Brazil in the coffee market and the greater and greater production of cheap Brazilian coffees. The situation was made worse by the fact that nearly 96 per cent of the Indian coffee was grown for export and there was no home market to fall back upon. But there was a sharp rise in the price of coffee in 1889 which was maintained till 1896. The rise was mainly due to political troubles in Brazil. The industry therefore was revived and enjoyed a period of brief prosperity from 1889 to 1896. The replacement of coffee by tea had been almost complete in Ceylon, but in India the movement had not gone very far and was now definitely checked.

The third plantation industry, i.e. the indigo industry, was almost stationary and there is nothing to record in its growth. Mr. O'Connor says about the trade in indigo, 'This is one of those long established trades of India like

¹ Report of the Labour Enquiry Commission on Coal and Tea Industry (1896). Note by Kumar Dakhineswar Mallia.

² Annual Note on the Cultivation of Coffee, 1896.

opium and silk which give no indication of progress.¹ The same might be said about the industry. Yet there was a certain amount of increase, for in 1894-95 the exports of indigo from India reached the highest point that they were ever destined to reach.

For the rest, there were other industries which carried the raw material only a stage forward, thus facilitating its export or its further use in advanced stages of industry. The main representatives of this class in India were the cotton and jute pressing industries and the rice and timber mills. These industries employed during their season a fairly large number of people. There was a very definite limit to the growth of such industries in any particular tract. Of these the most rapid growth took place in the rice and timber mills—an industry which was, as yet, mostly confined to Burma. The lac manufactories were, in their nature, somewhat analogous to this group and there was a fair growth in their numbers.

Then again there was the class of auxiliary industries which specially came into prominence because of the extension of railways in India and the growth of manufacturing industries, e.g. the engineering workshop and the iron and brass foundries. This was a growing class, but its extent was limited by the amount of extension in the use of machinery in India.

Lastly might be noticed the class of semi-factory industries. Of these the most prominent—the Madras tanning industry—was a very flourishing one. The spread of the industry throughout the more important towns of the Madras Presidency was rapid and its general growth was reflected in the rapid extension in the number of tanned and half-tanned hides and skins exported out of India. It is interesting to observe that the industry, which was obviously very paying, was confined to the Madras Presidency, though there were large exports of raw hides and skins from other parts of India. A some-

¹ J. E. O'Connor, *Review of the Trade of India for the Year 1888-89*, p. 36

what similar industry was the brick and tile industry of the Malabar coast—an industry first introduced by a missionary settlement in Mangalore, and which rapidly spread from there as soon as its success became apparent.

On the whole, during these fifteen years—especially during their latter part—there was a certain amount of quickening in the development of Indian industries. The bigger and the already established industries grew at a rapid pace, and there was fair growth in the auxiliary and the smaller industries. The prospect for Indian industrial development looked hopeful and Mr. Justice Ranade reviewing this progress in the early nineties said at the end of his remarks on the 'Present State of Indian Manufactures'—' I have placed before you what appear to me to be good grounds for the hope I entertain, that India has now fairly entered upon the path which if pursued in the same spirit which has animated its capitalist hitherto, cannot fail to work out its industrial salvation'.¹

From the growth of the industry one naturally turns to the condition of the labour force in the industry. It has been pointed out above that in the old Indian economic structure there was no place for the casual general labourer. One of the first things that created the demand for this class, was the operations of the Public Works Department; and this demand was intensified by the growth of the factory industry in India. It is impossible to generalize about the classes from which this labour was drawn or its living conditions; and the matter must be considered separately for each industry.

In the cotton industry in Bombay city itself the labour supply was chiefly drawn from the Konkan and Deccan districts of the Bombay Presidency. These were largely composed of the landless labour class, which was growing rapidly in India. In Ahmedabad, another centre of the cotton industry, the labour supply was mostly local, i.e. drawn from the surrounding country districts. In the cotton ginning and pressing industry

¹ M. G. Ranade, *Essays on Indian Economics* (1898), p. 118.

the labour was entirely local—and here the labour was mostly old women. In the Calcutta jute industry the labour employed up to about 1885 was entirely local but, henceforward, with the expansion of the industry and the need for more labour, labourers from the North-West Provinces (now United Provinces) and Orissa had to be imported. The proportion of this foreign labour was a steadily growing one. The Bengal coal mining industry was also growing rapidly, but the demand for labour till the end of this period was generally satisfied by the supply of the local aboriginal labour. In most other places, wherever there were any industries, labour was local, except in Rangoon, where during the rice-milling season the labour for loading and unloading had to be imported from Madras.

The question of the regulation of the conditions under which labour worked was first broached in 1875 by the appointment of a committee by the Bombay Government to enquire into 'the condition of the operatives in the Bombay factories and the necessity or otherwise for the passing of a Factory Act.' This committee was divided on the question of the necessity for passing a Factory Act. The manufacturing interests and a large proportion of the public in India were generally opposed to any measure of this sort. After numerous bills had been drafted the first Act was finally passed in 1881. This Act was of a very elementary character. It only provided for the regulation of the working hours of children below twelve years of age. Children below seven were not allowed to work in the factories and the working hours of children between seven and twelve were fixed at nine. There was some provision for the fencing of machinery, but an entire lack of any sanitary provisions. The Act was meant to apply only to factories employing 100 or more hands and using 'mechanical power.' From the scope of the Act the tea, coffee and indigo establishments were excluded.

It was soon found out that the provisions of this Act were entirely insufficient to safeguard adequately the interests of the operatives. Another committee was

appointed by the Bombay Government, but no general modifications on the lines recommended by this committee were adopted. Lancashire and Dundee were all this time complaining about the unfair competition of India on account of the lack of a Factory Act.¹ The opinion in India itself—especially in the Bombay Presidency—in favour of further legislation on the matter was also growing. At last the Indian Government appointed a Factory Commission in 1890. An Act, largely based on the recommendations of this Commission, was passed in 1891. The advance over the former Act was, that the Act now embraced all factories employing fifty hands, provided for a weekly holiday, fixed the minimum limit of the age of children employed at nine, and fixed the working hours of children between nine and fourteen at a maximum of seven. It also fixed the working day for women at eleven hours and prohibited night work for them (a provision which was largely vitiated by the exception made in the case of a shift system approved by the Local Inspector of Factories). It also made some provisions as regards sanitation and the inspection of factories.

But whatever legislation there was, it was very restricted in the scope of its application. The real restriction which robbed the Act of its value before 1891 was the application of the Act only to factories employing 100 or more hands. For it was the small factory in which the worst abuses existed. Another restriction was that the Act applied only to factories working more than four months in a year. On account of this provision a large proportion of the concerns engaged in seasonal industries, e.g. ginning and pressing of cotton and rice milling, escaped from the operation of this Act.

On the other hand there was no legislation at all on behalf of the labour force in the mining industry. Women were extensively employed in all mines—especially in Bengal—and it was feared that any legislative interfer-

¹ *Annual Report of H. M. Inspector of Factories, 1895.* Note on Factory Legislation in India.

ence would tend to hamper the development of the industry which was yet in its early stage'.¹ So far, then, as the regulation of the working conditions on the part of the Government went, a great part of the modern industry in India was outside its scope; and it was only after 1891 that factory legislation can be said to have become fairly effective.

The really important thing is not so much the nature of the Acts passed, as the light that the enquiries throw on the working conditions of the factory labour in India. It was only in Bombay and Bengal that there was a factory industry of any extent. The reports from all the other provinces generally insist on the fact that the industry is so small that no separate legislation is required for it.² But even though there was a uniform lack of regulation, the conditions differed widely from place to place.

The hours worked in the Bombay mills were, for males over eighteen, twelve and a half hours; for females over eighteen, eleven and a half hours; for young persons, i.e. from fourteen to eighteen, they were the same as those for adult males and for children from seven to twelve they were nine.³ These were the normal hours in the big mills, but they were exceeded in cases of pressure of work. Until the introduction of electric light into the mills there was a natural check on these hours—the maximum possible being fourteen in summer months. Before 1881 the children worked the same hours as adult males but the Act of 1881 lowered them to nine. The regulations, however, were not always enforced; and evasion was frequent. For example, the Central Provinces report (1889) on the working of the Factory Act states that in the Jabalpur mill

¹ *Employment of Women and Children in Mines. Correspondence, etc.* [Parliamentary Paper], 1893.

² *Reports of the Workings of the Indian Factory Acts, 1889* [Parliamentary Paper].

³ Hours worked in 1889. The hours of children were regulated by law. Figures taken from a table from the Bombay report in the above Parliamentary Paper.

both adults and children worked from sunrise to sunset—the only difference between their hours being that the adults had only half an hour's rest at midday while the children rested for an hour. As regards the working hours of women they were a little shorter in the Bombay industry than those of men, but in the up-country mills the hours were generally the same. Though the men did not complain much about these hours they at least wanted a weekly holiday. In the Bombay industry the workers got only five complete days during the whole year;¹ and even in mills where a regular weekly holiday was given the labourers were supposed to attend, for at least half the day, for the purpose of cleaning the machinery, etc. The real abuses, however, did not exist so much in the spinning and weaving mills as in the cotton ginning and pressing industry. Here the Khandesh industry was the worst. The evidence before the 1884 Factory Commission was of a terrible nature. One witness stated, 'In the busy season—that is in March and April—the gins and presses sometimes work both night and day and the same set of hands work both night and day, with half an hour's rest in the evening. The same set continue working day and night for about eight days.'² It was all the worse because the hands were mostly women. Another witness stated 'The women are looked on as part of the gins, and they belong to the establishment, and two or three hours is the longest time they can be absent out of twenty-three without any notice being taken of it.'³ After working eight days without stopping, 'they (the gins) are compelled to get another set of hands from Bombay.'⁴ All the other evidence on the Khandesh gin industry was of the same nature.

¹ *Annual Report of H. M. Inspector of Factories, 1886-87.* Note by Mr. Jones on *Factory Conditions in India*. See also evidence of Mr. Cocker before the *Bombay and Lancashire Spinning Enquiry*. (1887).

² *Report of the Bombay Factory Commission* (1885), p. 11.

³ *Ibid.*, p. 13.

⁴ *Ibid.*

As in the matter of working hours, so also in the matter of sanitation and ventilation the smaller concerns were the worst. In the bigger ones, which mostly came under the working of the Act, the sanitation, the ventilation and the fencing of machinery were fairly satisfactory. But apart from the big industry, the conditions were not so good. The worst offenders in this respect were the cotton and wool cleaning establishments in Bombay. Of one of these Col. Meade King remarks, 'I considered this place (in the absence of proper means of ventilation) utterly unfit for human beings to work in.'¹ On the small mills and factories he further remarks, 'In two-thirds of the works visited I have observed dangerous—in some cases *most* dangerous—machinery, mill gearing, fly wheels, etc., without any fencing whatever about them, and the marvel is that accidents are not of more frequent occurrence than they are.'² But he adds, 'I am disposed to think that the want of ventilation and the proper means of carrying off injurious dust and gases is of even more vital importance than the fencing of machinery.'³ The abuses, then, that existed in the Bombay Presidency were chiefly in the small non-regulated industry ; and here the conditions were truly terrible.

Perhaps the most vehement opposition to factory legislation of any nature came from the Bengal Chamber of Commerce and the then Governor of Bengal (Sir Ashley Eden) stoutly opposed the Bill in the Viceroy's Council. Whatever might be said of this attitude, it must be admitted that the conditions of work were perhaps the best in Bengal—especially in the Calcutta jute mills industry. The regular hours for running the mills were the same in the Calcutta mills as in the Bombay industry—sunrise to sunset. But the mills in Calcutta were worked on a somewhat complicated shift system and the work people were individually employed on an

¹ Letter of Col. Meade King (Inspector of Factories) to the Bombay Government, July 1882.

² *Ibid.*

³ *Ibid.*

average for about nine hours a day rising sometimes to ten. The exception to this rule were the weavers, who generally worked the whole day.

The Bengal workers also got a full Sunday holiday every week, and this no doubt counted very greatly in favour of the health of the working classes. The internal condition of the factories is described as generally well-ventilated and clean and the fencing of the machinery as effective.¹ There was another matter also in which the Bengal labourer was better off than his brother in Bombay. This was in the system of payment of wages. In Calcutta these payments were made weekly and, at the most, from about three days' to a week's wages were kept in hand. But in Bombay the pernicious system of monthly payment of wages prevailed and nearly three weeks' wages were kept in hand.² In this matter Bombay City was the worst, for even in Ahmedabad the payment was weekly.

There were during this period no enquiries into the condition of Bengal labour like the two Bombay Commissions. It is, therefore, not easy to know what were the exact conditions obtaining in the jute-pressing and the other up-country industries. They must have been a little worse than in the big industry but it cannot be said whether they were as bad as in the Khandesh gins. This, however, does not seem likely, as the local supply of easily exploitable labour in Bengal was much less than in the extremely poor province of the Bombay Deccan. Of the other stray factories and small industries much need not be said. The working conditions here depended very greatly on the individual manager or proprietor and the general condition of agricultural labourers in the surrounding district. Generally speaking, the hours and the conditions were more or less the

¹ Report of the Magistrate of 24 Pargannas. See above *Report of the Workings of Factory Acts*, 1889.

² This system persists to-day and has been largely held responsible for the indebtedness among the Bombay factory hands. See *Indian Co-operative Studies*. Essay No. iv. (1920); 'Co-operation among Factory-workers,' by Messrs. Devdhar and Joshi.

same as in the Bombay cotton industry, in places perhaps a little worse.

Lastly, in the coal mines there were no regulations whatever. Women and children were employed extensively underground in Bengal. In the Central Provinces, where the labour was mostly immigrant labour from the North-West Provinces (now United Provinces), very few women were so employed; and the opinion here was in favour of entirely prohibiting such employment of women. But in Bengal any suggestion of such interference was hotly contested. Here the 'family' system of working prevailed. The workers were mostly drawn from the local tribes of Sonthals and Bauris; they worked with their women-folk: the man cutting the coal and the woman carrying it. As yet very few attempts had been made to get the immigrant labour from the North-West Provinces (now United Provinces), but the rapid expansion of the industry was now making the want of a steady supply of extra labour severely felt.¹

¹ *Report of the Labour Enquiry Commission (Bengal) 1896.*

CHAPTER VII

THE AGRICULTURIST (1895-1914)

THE long period of fifteen years of comparative immunity from famines came suddenly to an end in 1895, and the periodical visitations of famines fell with extraordinary force on India during the years that followed. Two severe famines followed each other swiftly and made the closing years of the nineteenth century one of the worst periods in the history of Indian agriculture.

The famine of 1896-97 spread almost all over India. The only parts that were not affected by the drought were Lower Burma and the extreme south of the peninsula.¹ The Famine Commissioners had remarked in 1880 that the famine of 1876-78 was the severest in the century, but the famine of 1896-97 was spread over a wider tract and was quite as severe. The remarkable feature about this famine was that it visited parts which had hitherto been thought to be immune from famines. Thus it found Berar, which had been free from famines for sixty-four years and thus lulled into security, without any preparations to combat the evil.² The number supported on relief works was again very considerable; but the actual conduct of the works was better and much more efficient this time than it had been in the previous large famine (1876-78). This time the officers in charge had the benefit of the guidance of the findings of the 1880 Commission. These were found to work, on the whole, very well in this famine, and the Commission of 1898 recommended only some minor alterations—chiefly

¹ T. W. Holderness, *Narrative of the Famine of 1896-97* [Parliamentary Paper.]

² The same was the case with Gujarat in the famine of 1899-1900. This tract had been free from famines since 1812.

in the direction of a more liberal treatment of those on relief—in them. Naturally the relief administered was not on the same basis everywhere and the Commission found the conduct of certain Provincial Governments—especially the Bombay Government—in the matter of granting relief and the remission of assessments, etc., niggardly.¹

But by far the most interesting part of the report of these Commissioners is their estimate of the condition of the agricultural classes in 1895 and also how far they had progressed during the fairly prosperous period, 1880-95. They find that in India as a whole there had been a considerable increase in the income of the landholding and cultivating classes on account of the rise in prices. 'Their standard of comfort and expenditure has risen', so their powers of resistance against famines had risen; but, the Commissioners remark, 'whether it can be safely said that they have much improved in thrift, that is, in the accumulation of capital, is open to doubt.' But, though the general powers of resistance against famines had risen, one of the most important safeguards in old times against such calamities had fallen into disuse. 'The export trade and the improvement of communications have tended to diminish the custom of storing grain which used to be so general among the agricultural classes.' If the landholding and cultivating classes had, in their opinion, undoubtedly profited from the rise in the prices of food grains, this was far from being the case with agricultural day labourers—a class which was a rapidly increasing one. Of this, together with the lower strata of the artisan classes, the Commissioners say, 'The wages of these people have not risen during the last twenty years in due proportion to the rise in price of their necessities of life'; further on, 'This section of the community lives a hand to mouth existence with a low standard of comfort and abnormally sensitive to inferior harvests and calamities of season.' 'The ex-

¹ *Report of the Indian Famine Commission, (1898) chaps. iv. and v.*

perience of the recent famine fails to suggest that this section of the community has shown any larger command of resources';—and about the extent of this class, 'far from contracting, it seems to be gradually widening, especially in the more congested districts.' These conclusions are strengthened when they show the condition of the different classes in India province by province. In Bengal the resisting power of the people had generally risen since 1873-74, but as regards the petty agriculturists and the labouring classes in Behar, they did not seem to have profited by the rise in the prices of food grains. The Deccan districts of Madras—which was one of the tracts most liable to droughts—had been gradually improving their condition before 1876. But the famine of 1876 had hit them very hard and left them much impoverished; the progress they had been able to make since then had been very slow, and on the whole there did not appear to be any general improvement nor a general decline. As regards the Bombay Presidency the Provincial Government held the view that the last famine showed a remarkable increase in the powers of resistance of the cultivators of the Deccan and the Southern Maratha country. About this the Commissioners write, 'We are not really capable of criticizing this opinion, but it seems to us to be rather too sanguine a view of the situation.' The North-West Provinces (present United Provinces) Government also drew the conclusion that the cultivating classes, both tenants and proprietors, had greatly improved their position, but that the labouring classes had not shared in the general prosperity. The Famine Commissioners qualified this statement as regards the small proprietors and cultivators south of the Jumna, generally. In this tract they failed to find any signs of improvement. In the Central Provinces the Government thought that the cultivators had very much strengthened their position; but here again the Commissioners differ. They say, 'There is evidence that many of the old malguzars and old tenants have fallen hopelessly into debt, while others are just able to maintain their position in years of

ordinary prosperity. The labouring classes, we believe, live in tolerable comfort in ordinary years, but they save nothing for bad years and there are no signs of increased resistance on their part.' In the Punjab the conditions were slightly better. Here a greater part of the province was protected by irrigation than was formerly the case and the cultivators were fairly well off, but in congested districts there was a great deal of subdivision and indebtedness among the small owners. 'The labouring classes in this province are fairly well off and frequently able to save from their earnings.'¹

The conclusions of this Famine Commission have been given rather in detail, mainly because they are, perhaps, the most authoritative on the question of the prosperity of the people, and also because they help to show the entire dependence of the large majority of the Indian populace on the nature of the seasons. The famine of 1896-97 was a great shock to the agricultural classes of India. But this was not all. Hardly had the people begun to recover from the famine when another season entirely failed over a large part of India. The famine of 1899-1900 was not so widespread but certainly was very severe. During these years Bengal and Burma had good rice crops and the distress was not acute in the North-West Provinces (now United Provinces), Oudh and Punjab; in the south of India the Madras Presidency suffered a great deal, but the most distressed parts were the Bombay Presidency, the Central Provinces and Berar, the major portion of the Nizam's Dominions and a great portion of Central India.² And wherever there was distress the form of it was acuter than ever, especially in those tracts of the south where the famine of 1896-97 had also fallen very heavily. This will be seen from the fact that though the famine of 1899-1900 did not cover so wide a tract as the two earlier famines (1896-97 and

¹ For the above account see *Report of the Famine Commission, 1898*. Chapters i, ii and iii.

² *Papers Relating to the Famine and Relief Operations in India, 1899-1900* (Parliamentary Papers), Nos. 80 and 81.

1876-78) the numbers of people who resorted to famine works this time far exceeded those of any previous famine ; and the cost of administering the relief came to about fifteen crores of rupees.¹ No doubt, a part of this might be, and was attributed to a liberal granting of relief and laxity of tests. This was shown by the fact that the percentage of people relieved differed from district to district, though the acuteness of distress might be the same in all. Thus in the Betul district of Central Provinces as much as 40 per cent of the population were relieved, while the percentage in the adjoining districts was much smaller. There was also the fact that at the end of this famine the people did not leave the relief works as readily as they did in other famines. This can be attributed to the very high wage that they were earning on the relief works, but it might also be due to the fact that, having suffered from two famines in quick succession, the people were not quite as confident as before that a good season had really set in. This second famine was specially notable for the very high mortality amongst cattle. It has been remarked above that this is one of the main features of an Indian famine.² This dearth of fodder crops was remarkable in 1899-1900 and the mortality among the cattle in Gujarat was terrible. This was all the more unfortunate, because the Gujarat breeds were amongst the best and most improved in India, and the very careful cultivation of the Gujarat peasants depended on the high quality of their cattle. The Government took special measures to cope with this fodder famine ; and some forests were thrown open, and in others the Government took

¹ *Report of the Indian Famine Commission, 1901.* Part I.

² 'After all a fodder famine is the worst calamity that can befall the people ; it does not necessarily come whenever there is a food famine, because it may happen as in 1896 that the kharif crops grow large enough to give a supply of fodder, though yielding little or no grain' (p. 122). W. H. Moreland, *Agriculture of the United Provinces, 1912.* 'The emergency cannot be met by the individual cultivator to any great extent' (p. 123), *Ibid.*

measures to cut down grass in the forests, bale and press it, and then sell it to the people. The Central Provinces supplied a good deal of fodder to Gujerat, but the insufficiency of rolling-stock on the railways prevented the supplies from being utilized to their full extent.¹

These two famines were truly very great calamities. Their effects were manifold, weakening the health of the people and undermining their *morale*. They made the masses easy victims to epidemics of cholera and plague ; but, as pointed out in a previous chapter, their worst effect was in putting back the clock of agricultural progress. Almost all the progress that had been made from 1880 to 1895 was lost over wide tracts of India during these disastrous five years. Two of the most immediate effects of these famines in the domain of agriculture were (a) the decline in the double cropped area (b) the displacement of the industrial crops and the export crops by food grains. For example, in the Central Provinces, except for a growth in the area under cotton, there was a general retrogression in the area under crops, and on account of a rapid succession of bad harvests the practice of double cropping had practically disappeared.² In the United Provinces, where the famine of 1899-1900 had not been felt, the area under double crops had risen, but this rise was very slow as a result of the earlier famine. The famines had also the result of decreasing the total area under cultivation ; this was the case in the United Provinces and also in the Bombay Presidency, but the result in this matter was not quite so marked in the Central Provinces. The second result was the substitution of food crops instead of export or industrial crops, or even the substitution of inferior food crops in place of the more remunerative ones—especially because (as was generally the case) these inferior crops were also the hardier ones. For example, in the United Provinces indigo and oil seeds

¹ See above *Papers Relating to Famine*, 1899-1900. Nos. 82-90.

² *Moral and Material Progress of India Report* (4th decennial) 1891-92 to 1901-02. Section on Agriculture.

were to a very large extent replaced by food grains ; in the Bombay Presidency this same tendency was very much marked, and in the Central Provinces wheat, grain, linseed and rice had all been replaced to a large extent by the less remunerative millet crops. It may be remarked here that this latter effect is perhaps not very lasting. In a few years' time after the famine, with the advent of good seasons, the balance between the different crops is regained. The same cannot be said of the area which goes out of cultivation or the decrease in the area double cropped. But the really harmful effect of the danger of famines is that they prevent the cultivator from adopting a more remunerative but a more delicate crop, and also discourage him from investing too much in the land in the way of manures, etc., except where the land is irrigated and thus protected from the variability of the seasons.

The fourteen years from the beginning of the twentieth century to the outbreak of the war were fortunately free from any such complete failure of harvests as the two in the last decade of the nineteenth century. But the seasons were neither very propitious. The opening years of the new century did not bring very good harvests. In Bengal and Bihar nearly all the first seven seasons were unfavourable and in Madras Presidency the whole of the first decade saw seasons which were below the normal. There were also individual years which brought drought in certain provinces, such as the year 1902-03 in the Central Provinces, and the year 1905-06 in the United Provinces and the Punjab. But the worst year of this decade was 1907-08. The distress was very general throughout the United Provinces and large relief works had to be opened. The season was also very bad in the provinces of the Punjab, Bengal, Central Provinces, Bombay and Upper Burma ; and relief on a small scale had to be granted throughout almost all these provinces. But the seasons after 1909 were on the whole favourable, and in 1914 India may be said to have been in a period of mild agricultural prosperity ; and as to the general condition of the landholding and cultivating classes of

India, it might be said safely that they finished the period a little better off than where they began at the beginning of the century. For though the cultivators had gained in material wealth during 1880-95, they were the hardest hit on account of famine. (The agricultural labourers are, of course, excluded from this, for though they gained no ground during the period of prosperity, they were precisely the class who suffered most in the time of famines.) A great deal of the ground gained by the cultivating classes during the fifteen years previously was lost by them during the closing years of the nineteenth century. After the second famine they began at a low level; but the circumstances in most parts of the country favoured a more or less rapid recovery. The rise in the price of food-grains, which became particularly marked during the first decade of the twentieth century, helped the land-owning classes a great deal. The spread of communications and of improved methods of cultivation, however slow, placed the actual cultivator in a fairly favourable position.

It is interesting, at this point, to see what changes in the area under cultivation and the crops had taken place during the period.¹ The five years from 1895 to 1900 have to be left out of account, because they were entirely abnormal and the fluctuations in famine times cannot give any idea of the general tendencies. Though the total area varied a great deal from year to year on account of the nature of the seasons, there had been, on the whole, a very real growth in the total area under cultivation. An important cause of this growth was the extension of irrigation—especially in the Punjab, where the canal colonies were created during this period. But this also indicated a real growth in the number of lands on the margin of cultivation being brought under the plough.

With this extension in the area under cultivation the first query is what percentage of this total do the food grains occupy. In 1901-02 the percentage was 77.8 and

¹ See table at the end of the chapter.

in 1913-14 it remained much the same. This steadiness in the percentage of the area under food grains, though the total area under cultivation increased, is a remarkable fact ; and, indeed, the agricultural statistics of this period show this same steadiness of proportions everywhere. With a few exceptions like gram or fodder crops there is no remarkable rise in the areas of crops. The rise is in most cases proportionate to the rise in the total area under cultivation. Rice retained its position as the most widely cultivated of all. The only important change in proportions was that the area under wheat had risen a great deal ; but here it must be remembered that the area under wheat was liable to somewhat wide fluctuations. This rise in the area under food grains was necessitated—as in a previous period—by the increase in the population. India is not a food exporting country to any great extent. Rice and wheat are the only important food-grains to be exported. The large crops of pulses and the minor food-grains like the millets are, almost wholly, retained in the country for home consumption. In rice even, India must be considered apart from Burma. The rice exports of India consist mainly of Burma rice ; and the tendency was marked during this period for Burma rice to take a larger and larger proportion of the rice exports of India ; in fact Bengal itself had begun regularly to take in rice supplies from Burma. As regards wheat, which was the largest crop of India proper to be exported, only about 10 per cent of the total crop grown was exported in normal years.¹ Even in wheat the exports fluctuated enormously and even a slight scarcity in India was enough to curtail the exports of the crop. As a matter of fact, the exports of food grains in fair years did not show that India was a food-exporting country. These exports are rather to be considered as a reserve against the famines ; only instead of being stored, as of old, these surplus crops of favourable years were exported ; and the slightly extra area under food crops, beyond what would be necessary to meet the home demands in

¹ F. Noel Paton, *Indian Wheat and Grain Elevators* (1913).

average years, was a guarantee against the variability of seasons. The same fact is emphasized by statistics, which show that the increase did not take place only in the areas under rice and wheat but also in Jawar, Bajra and other inferior food grains which were not exported out of the country. That is why it can be asserted safely that the increase in the area under food grains was necessitated by the increase in the population. The bulk of the new area brought under cultivation was, then, taken by the food crops; and the bulk of the peasantry were still engaged primarily in the production of food supply for the home and the local market.

Among the industrial crops the areas occupied by the oil-seeds and cotton were the most important. The oil seeds had grown steadily during these fifteen years and their percentage of the total had slightly increased since 1901-02. Naturally, there were somewhat wide fluctuations from year to year among the individual constituents of this group. But the three main crops—linseed, sesamum, and rape and mustard—had maintained their position. Of the others, ground-nut had recovered from its decline towards the end of the nineteenth century; and the introduction of new varieties had helped it to improve its position. The oil seed was largely an export crop; especially was this so with some constituents of this group like linseed and ground-nut.

The area under cotton had also increased steadily. Cotton, of course, could not be grown all over India and this increase in area, which was large, was chiefly due to the increase in the proportion of land occupied by cotton in the cotton tracts. Jute was even more largely restricted to a particular area—viz., Bengal—than cotton. But the proportionate increase in the area under this crop had been even greater. Many attempts had been made to introduce the cultivation of jute in other tracts but most of them had failed; and jute continued to spread in the restricted area of Bengal. The areas under the other important industrial crops, such as opium and indigo, definitely declined. In the former case this was due to the agreement of the Government of India

with the Chinese Government, and in the latter to the competition of synthetic indigo. Fodder crops had grown remarkably in popularity. The cultivators had come to realize that these crops were very necessary for the proper feeding of their cattle. They had also been found to be very remunerative, and very useful as rotation crops. The area under sugarcane was almost stationary and in some places slightly declining. The area under this crop declined by nearly 20 per cent during the years 1890-1910,¹ but towards the end of this period it was recovering slightly. All the statistics, indeed, show prominently the fact, that the character of Indian agriculture as regards the crops grown had changed but slightly during these fifteen years. The food crops grown chiefly for local consumption continued to occupy the premier place; and even in the industrial crops, the increases in the area under cultivation took place mainly in the already well established crops such as cotton, jute and the oil seeds, while the decreases under indigo, opium and sugarcane were due to peculiar causes connected with their individual industries.

The statistics of yield are unfortunately lacking, and the figures given for live-stock, ploughs, carts, etc., are only estimates and, therefore, entirely unreliable for a comparison over a number of years. We are thus thrown back again on a consideration of the work of the Governmental agencies for an estimation of the extent of improvements in the methods of cultivation. Such an improvement must always play a large part in the agricultural economy of any country. The Government departments continued to be the chief agency for disseminating this kind of information. They were the most suitable; for the cultivator, when he saw that the officials themselves were interested in a certain innovation, was prepared to try it even though he was always sceptical about its results.² Though a certain amount of agricultural improvement had been achieved in the

¹ F. Noel-Paton, *Sugar in India*, 1911.

² J. Kenny, *Intensive Farming in India* (Introduction), 1915.

nineteenth century by a number of Government agencies in the way of introducing exotics and certain other improvements, there had been, then, no concerted and organized effort in this direction. The agricultural departments had been, no doubt, in existence in the provinces for a number of years, but their lack of concert and—a very important thing—the want of permanent experts had prevented them effectively from doing any solid work. The first step in bringing together these scattered forces was taken under the administration of Lord Curzon. The most important step was the appointment of an Inspector-General of Agriculture for all India in 1901. This gave the various Agricultural Departments, for the first time, a head who was also an expert in agricultural matters. This step was followed by the establishment of an Agricultural Research Institute, a few provincial agricultural colleges, and a few schools. That Government had realized the necessity of doing something towards this object—not merely in a haphazard manner—was shown by an increasing expenditure on the Agricultural Department. The period of one decade was too short, the staff of the departments as yet too small and too scattered, and the expenditure on this all important matter too niggardly to show any very definite results before the end of this period.

The improvement of cotton has always been one of the favourite subjects of all agriculturists in India. In this matter a few exotics were introduced and various experiments on indigenous varieties carried out—especially in the Madras Presidency.¹ One of the greatest obstacles to any improvement in the quality of cotton had always been the difficulty of the cultivator in getting pure seed; and the very common practice of resorting to the local gin for the seed-supply has acted very unfavourably in this direction. An attempt was made to combat the evil, to some extent, by the estab-

¹ *Vide* the instructive history of the rapid spread of Cambodia cotton and the deterioration in its quality. J. Mackenna, *Agriculture in India* (1915).

lishment of seed farms which were used for the dual purpose of the selective breeding of varieties and the distribution of improved seed. But above all, the impetus towards an improvement in the quality of cotton came by the creation of a market for cottons of a higher quality. This was the result of certain causes which had compelled the Indian mill industry to turn its attention towards the production of goods of a finer quality than they had been used to produce hitherto. The market for these finer cottons was as yet very small, but it was an expanding one, and in it lay the real hope for the improvement in the quality of cotton.

Wheat as an export crop had been increasing in importance and attention was, naturally, directed towards making the wheat grown for export suit the requirements of its foreign market. One of the most important branches of research work carried out in India, was an investigation into the different varieties of wheat grown in the country and determining the localities to which these different varieties were best suited. The question of preventing rust and destruction by insects during storage also came up and many advocates were found for the introduction of the grain elevator system in India. But the practicability of this step was questioned and the issue is still in doubt.¹

These are a few examples. The problems calling for attention were very varied. They concerned almost all the staples of India. The introduction of new varieties of rice was tried with success in some parts; improved and early growing varieties of ground-nut suitable to the foreign market were introduced into cultivation. In the latter matter the experiment most successful was the introduction of ground-nut cultivation into Upper Burma. Apart from improvements in the crops experiments were made in improved implements and artificial manures. Something had been gained from the numerous failures of the last century, and more

¹ Mr. and Mrs. Howard, *Wheat in India* (1909). See also above F. Noel-Paton, *Wheat*, etc.

attention was now paid to the requirements of the cultivator and his financial capacity. Light iron ploughs and small pumps for water lifting were taken up in many parts. One of the instances of these varied activities was the establishment of a Fisheries Department in Madras under Sir Frederick Nicholson. This introduced, especially along the Malabar coast, improved big nets—worked on a co-operative system—also improved methods of fish curing and the establishment of sardine oil and guano manufacturing establishments.¹

But after all, the improvements effected were of no revolutionary nature. They were limited in their scope, and did not always reach the class of peasant proprietors. The work left is enormous, but whatever little was done helped, no doubt, to improve the position of the agriculturist. One of the main reasons for the greater success attending the efforts of the Government in the introduction of improvements was that the co-operation of the local landholding classes was invited and was obtained in this cause. In many cases this proved the most useful agency, and in the Central Provinces and in some parts of the Bombay Presidency local committees of landowners were formed which worked in conjunction with the Agricultural Departments.²

The poverty of the peasant has always been perhaps the most formidable obstacle to the introduction of agricultural improvement in India. The chronic indebtedness is the most important factor contributing towards this poverty. Credit plays, perhaps, as important a part in the agricultural economy of India as water. The fact is patent that, until recently, no attempts whatever had been made to organize rural credit in India. Mr. Justice Ranade emphasized, rightly, this

¹ See evidence of Sir Frederick Nicholson and Mr. Govindan : *Indian Industrial Commission* (1916-18). Minutes of evidence. Vol. iii.

² See *Reports on the Introduction of Improvements in Indian Agriculture by the Work of the Agricultural Departments*, 1909, 1910, 1912 and 1914. For Agricultural Associations see pages 11-15 of the 1912 report.

want of organized credit as the greatest handicap to the agriculturist and to rural industry.¹ There was very little hope, indeed, of any progressive improvement in Indian agriculture if the exorbitant rates charged by the local money-lender had to be paid by the cultivator on every bit of capital that he put into his land. This fact had been long realized and the 'sowcar' had been the *bête noir* of all writers on Indian economic conditions. But after all the money-lender had been fulfilling a very important function in the carrying on of agricultural operations in India and it was no use ousting him or abusing him if there was nothing better to take his place. The fact that the money-lender and his exactions are not an element peculiar to Indian agriculture has been already emphasized by many writers. As Sir F. Nicholson put it, 'the substitution of organized credit for that of the money-lender is a necessary development of civilization. It is *not* merely cheap and facile credit that is required.'² Attention was early directed to the land banks and the co-operative credit societies of Europe which had been chiefly instrumental there in ousting the local money-lender. The first important step in this direction was taken when the Madras Government appointed Mr. Nicholson (afterwards Sir Frederick) to investigate the problem. His report was very thorough but no immediate action was taken on it. In the meantime individual officers in certain districts had been taking an interest in the matter. Mr. Duperiex of the N. W. Provinces³ had started certain experimental village banks in that province. At about the same time similar societies had been started in the Multan district of the Punjab by Mr. Maclagan and

¹ Ranade, *op. cit.* Essay on *Reorganization of Real Credit in India*.

² See *Report on the Possibility of Introducing Land Banks, etc., in Madras Presidency*. Vol. i, p. 42.

³ The name of the province was changed to the United Provinces of Agra and Oudh in 1900. As far as possible the names have been given with regard to the period in which mention has been made of them.

Captain Crossthwaite.¹ There was no lack of interest shown by the local agriculturists in these societies and the Government was induced to appoint a small committee to enquire into the establishment of co-operative credit societies in India. This committee in its report laid down the general lines on which, in its opinion, these societies should be constituted in India. The first Co-operative Societies Act was passed in 1904 and the first step of the Government was the appointment of Provincial Registrars for each province to further the work of co-operation. Unfortunately, the first Act was very restricted in its scope. It restricted the function of these societies to supplying funds to their members and a good many of its provisions as interpreted by the courts became a hindrance to the further spread of the movement.² Therefore, the Act was superseded by a new one passed in 1912 which removed these old restrictions. Quite a number of supply and sale societies immediately came into existence. These supply and sale societies were also greatly instrumental in the spread of agricultural improvements in India. It will be clear that the movement was hardly a decade old in 1914. Considering this short period the progress made in the movement was quite satisfactory. In 1913-14 the position was :—

Number of societies	No. of members	Loans issued to members and other societies
14,881	695,998	£ 3,361,154

Almost all these societies were agricultural societies and also mostly credit-societies. In the movement at the present time controversies have sprung up as to the future constitution and lines of progress, chiefly turning on the point of the dependence of individual societies on central

¹ *Report of the Committee on the Establishment of Co-operative Credit Societies in India, 1901.* Evidence of Mr. MacLagan, etc.

² H. W. Wolff, *Co-operation in India*, chaps. ii and iii.

banks.¹ Compared with the needs of India the extent of these societies was insignificant in 1914, but the future of the agriculture of India largely rests on further rapid progress on the lines of co-operation.

¹ *Ibid.*, and see above *Essays in Co-operation*.

AGRICULTURAL STATISTICS OF BRITISH INDIA

	THOUSAND ACRES				
	1894-95	1901-02	1906-07	1912-13	1913-14
Fallow land	30,183	42,147	39,935	48,760	52,620
Net area cropped	196,601	199,708	214,226	224,166	219,192
Irrigated area	23,825	32,582	36,654	45,539	46,836
Rice	69,280	70,067	73,541	78,752	76,908
Wheat	22,761	18,607	25,137	23,861	22,685
Jawar	20,863	21,819	20,781	20,968	21,405
Bajra	11,337	13,197	15,034	16,269	15,385
Total food grains	181,576	176,999	195,117	201,373	191,573
Sugar	2,889	2,596	2,624	2,712	2,708
Oilseeds	13,930	11,968	13,965	14,936	14,658
Cotton	9,717	10,299	13,771	14,138	15,844
Jute	2,275	2,278	3,523	3,324	3,136
Podder crops	1,931	2,944	4,548	5,770	5,910
Indigo	1,704	792	449	227	169
Tea	414	495	505	558	572

CHAPTER VIII

INDUSTRIAL PROGRESS 1895-1914

THE industries which had been progressing in 1895 suffered a considerable check during the years 1895-1900. Industries in India, especially those which depend for their market on the demand in the country itself, are bound to suffer with a collapse of agriculture. Such a sympathetic collapse of industries was a prominent feature of the old Indian economic structure, and even in modern India the artisan industries are in the same condition as they were in the old days. Of the bigger industries coal was the least affected by agricultural distress in India and jute also not very greatly.¹ The cotton industry on the other hand was in a different position. Its market for woven goods was chiefly Indian and also a large portion of the yarn produced in the mills went to satisfy the demand of the Indian hand-loom weaver. The Indian hand-loom weaver in his turn supplied the coarse cloth, chiefly to the peasant. Now, it is a well-known fact that in times of depression the first economy that the Indian peasant effected was in the matter of his clothing, and thus the country weaver, with the agricultural labourer, was the first to arrive on the relief works. Hence, the market for mill-made yarn

¹ The jute industry was also affected in its Indian demand. For the reduction in the exports of food grains and other raw produce affected the demand for gunny bags.

shrank rapidly in any period of agricultural depression. We need not, therefore, be surprised to find that during the period of the two terrible famines (1895-1900), the cotton industry also suffered a very severe trade depression. The famines, with their attendant depression of the hand-loom weaver, contributed largely towards this depression of the cotton industry, but there were also other causes at work during the period which were quite as important in bringing about this result.

In 1896 appeared in India, for the first time, in a virulent form, that epidemic which has been working havoc ever since with the population. This scourge of the bubonic plague appeared first in that year in Bombay. It may have been known in India before, but never in such a terrible form. The result was that the population of Bombay, frightened at this strange and terrible visitation, left the city in large numbers. There was a wholesale exodus; and with the rest the labour force of the cotton industry left the city. This was the first blow. After a year or two the people became accustomed to the epidemic, and though it did not abate in its intensity, the labour force was not so sensitive to its visitations as on its first appearance. After the first famine came the plague and after the plague the second famine. But this was not all. Two other factors appeared just afterwards. In 1902 there was the great American speculation in cotton; this sent up the price of cotton to extraordinary heights. The mill and the hand-loom industry both suffered. The high price of cotton made the production of manufactured goods, especially the coarser goods, on which chiefly the Indian industry depended, highly unprofitable. The other factor was a disturbance in India's chief foreign market, viz. China. The bulk of India's foreign exports of yarn went to China and a depression in that market meant a great blow to the spinning industry. Thus this period of depression lasted from 1896—with slight periods of recovery—up to nearly 1905. But in spite of this prevailing depression the rate of growth in the industry was more or less uninterrupted.

COTTON INDUSTRY (1895-1914)

—	1895-96	1900-01	1904-05	1907-08	1913-14
Cotton Mills, No.	150	194	206	227	264
Persons employed.	146,552	156,355	196,369	225,367	260,847
No. of Looms...	37,278	40,542	47,305	66,718	96,688
No. of Spindles.	3,852,611	4,942,290	5,196,432	5,763,710	6,620,576

This table shows that there was a pretty rapid growth in the industry during these years of depression. It will be observed from the figures that during these years of depression the number of spindles had begun again to rise in a greater proportion than the number of looms; and that most of the rise in the number of spindles came about during the years 1895-96 to 1900-01. Indeed, this feverish growth in the number of spindles largely contributed to the overstocking in subsequent years of the China market and the falling-off in the demand from that quarter.

About 1905 the depression lifted. Agricultural prosperity in a small measure had returned, the plague had ceased to frighten people away from industrial centres, the price of raw cotton had resumed its normal level and China was bare of stocks. Therefore, in the next two or three years the Bombay industry enjoyed unprecedented prosperity. The boom was specially pronounced in the yarn industry and the spinning mills paid fabulous dividends. The demand for the yarns was so great and the price so remunerative that the mills were kept working for as long a day as was, in the circumstances, possible. The newly introduced electric light made possible a very long day. There was feverish production and the China market was soon overstocked again. In 1907, with this, came also the general world trade depression. Short time had to be run everywhere,

especially in the yarn mills. The progress was continued well after this depression and in 1914 the cotton industry was a growing and a fairly prosperous industry.

Apart from the ordinary progress two tendencies may be noticed in the recent history of the industry. These were (i) the continuance—very marked since the beginning of the century—of the more rapid growth in the number of looms as compared with the number of spindles and (ii) the tendency of the cotton manufacturers to turn out a finer class of goods. The first of these tendencies will be easily seen from the table. The reason for this growth of the weaving industry is not far to seek. It is to be found in the violent fluctuations of the last twenty years. The yarn market for the Bombay industry was mainly the China and the home market. For its exports it depended almost entirely on the China market. Here it had to face the competition of Japan and Lancashire. Depending thus for its exports almost entirely on one market, which again was not particularly stable, the fluctuations in the fortunes of the yarn industry were naturally violent. As regards the home demand, this also varied with the fortunes of the agriculturist. The Bombay industry was, therefore, always trying to find new markets for its yarn products, but in this it had not been particularly successful. Mr. Graham Clarke gives another reason for this tendency of the mills to add looms in a larger proportion. He says, 'the cloth market, being farther removed from the raw material, is a more stable market than the yarn market. At times the yarn mills make much larger profit than ever fall to the lot of the weave mills, but when the reaction comes the yarn mills usually feel it first. Thus in 1905 and part of 1906, yarn mills simply coined money, while the weave mills only made moderate profit. At this time (April 1907) the yarn mills are running short time while the weave mills are making the same profit as before.'¹ Considering this it was natural that the industry should now turn to the stabler weaving markets.

¹ Graham Clarke, *op. cit.*, p. 13.

The market for woven goods was very largely the home market, only about 1-6th to 1-7th of the total production being exported. (In the case of yarn the proportion of exports came up to more than a third, but this proportion was a slightly diminishing one.) These exports went chiefly to Arabia, Persia, East Africa and the Straits. Now the home market for mill-woven goods, not being dependent on the poorest classes, was much more stable than the market for the products of the hand-loom. Thus there were no phenomenal profits to be reaped in this branch of the business but the prosperity of the industry was more stable. The other tendency, that of the production of finer counts of yarn, was due to the same causes. In the initial stages of the growth of the cotton industry, when the market was very large and the extent of the industry very small, the flow was naturally in the direction in which dividends were most easily earned. In the early days, the well-nigh universal system of paying the agent on the output of the mill, without any relation to profit and loss accounts, told also in favour of the very general production of coarse yarns and only the inferior kinds of piece-goods; and once the machinery was installed for the production of these coarse goods it was difficult and uneconomical to produce the finer qualities on it. But since 1890 the expansion of the foreign market for coarse yarns had been very slow; the home market had also been completely captured by about 1900, and the competition in the industry had become keen. The industrialist had, therefore, to turn his attention to newer and more profitable fields.¹ In spinning, the best new market available was the home market* for finer yarns, which as yet was completely dominated by Lancashire. The larger growth of looms was also prompted by this desire to find new markets for the industry. In this connection it should be noticed

¹ See article by Mr. D. E. Wacha (now Sir) pleading for a movement of the industry towards the production of finer goods in the *Industrial Quarterly Review of Western India*, vol. i, No. III. 1892.

that the quantities of twist and yarn exported from India were almost stationary since the nineties while the quantity of piece-goods had slightly diminished. Thus with stationary or contracting foreign markets the growing industry had to turn its attention more and more to the home market and here the production of finer yarns and piece-goods was the most promising field.

The growth of the jute industry in India at this time was unmarked by any special feature except its rapidity.

JUTE INDUSTRY (1895-1914)

—	1895-96	1901-02	1907-08	1913-14
No. of Mills ...	28	36	54	64
Persons employed ...	78,114	114,795	187,771	216,288
Looms	10,169	16,119	27,244	36,050
Spindles	214,679	331,382	562,274	744,289

The old tendency for the number of mills to increase in a much smaller proportion than the number of hands, looms and spindles is still marked, but not to so great an extent. Here another interesting feature is that the number of looms and spindles has increased in a much greater ratio than the number of hands employed. This very possibly shows economy of labour, by the introduction of better machinery or on account of the management being on a larger scale than before. The growth of the industry was not so rapid during 1895-1900 on account of the prevailing famines; though these did not directly affect the industry, they did so indirectly by stopping the export of food-grains and other raw agricultural produce out of India and thus diminishing the Indian demand for gunny bags. The industry also suffered a few periods of depression, such as the one in 1905-06. The growth of the jute mills took place mostly round Calcutta, and the extent of the industry

outside this area was insignificant. The Bengal industry possessed a great advantage in being near the source of the supply of raw jute ; for Bengal had a monopoly of jute. During this decade, however, competition was growing abroad, especially in Germany and the United States. The Continental and American industries were generally encouraged by their national Governments by a tariff on foreign jute products, while raw jute was allowed in free. But this did not interfere with the growth of Indian industry, and side by side with a large increase in the exports of raw jute the exports of jute manufactures were also increasing rapidly.

The production of minerals in India made rapid strides during the period 1895-1914. The old industry of coal-mining made very rapid progress and two practically new industries—petroleum and manganese—attained great importance during this period. Some idea of this great general increase can be had from the following table :

Total annual value (quinquennial averages) of mineral production in India.

1898-1903	1904-1908	1909-1913
£4,329,927	£6,716,325	£8,393,222

The record of the coal-mining industry is one of almost uninterrupted progress. It progressed by leaps and bounds and outran the hopes of the most confirmed optimist. The average production of coal for the years 1891-95 had been 2,460,000 tons, while the average production during 1896-1900 was 4,228,000 tons. An enormous progress was achieved in these five years and what is more, the rate of progress was well kept up in years to follow. That the coal industry did not suffer on account of the famines is due to the fact that its chief customers were the railways and the jute and other Bengal industries. Railways far from suffering from famines were then busier than ever.

COAL INDUSTRY (1900-1914)

—	1901	1906	1911	1914
Total output, tons.	6,038,053	9,112,663	12,051,835	15,738,153
Persons employed.	...	99,138	116,153	151,376

The progress was not due at all to the discovery of any new coal-fields but to the increased exploitation of the well-known Bengal coal-fields.¹ These coal-fields together produced in 1906, 95 per cent of the total Indian production of coal.² The history of the industry during this period was not continuous. The rate of growth of the industry was, indeed, throughout rapid and generally speaking uniform, but if we consider the growth of the industry in relation to the growth of the railways and the coal-consuming industry in India, then the history seems to fall into two distinct periods ; the first from 1895 to about 1908 and the second from 1908 to 1914. The first period was marked by two distinct tendencies : (i) the growing excess of the exports of Indian coal over the imports and (ii) the diminishing share taken by the railways of the total produce. At the same time the imports of coal into India were also steadily diminishing. In this period Indian coal more or less captured the demand of the railways completely. The Indian railways had since 1902 almost given up using foreign coal. From this date onwards, of the total coal used on Indian railways 99 per cent was Indian. As to the proportion of the total coal output of India used on Indian railways, in 1895 about 38 per cent of the total was taken by the railways ; in 1906 this had fallen to 30 per cent and it

¹ These after the reorganization of provinces in 1911 formed a part of the newly created province of Bihar and Orissa.

² Sir T. Holland, *A Sketch of the Mineral Resources of India*, 1908.

continued to diminish further for some time. All these tendencies showed that the coal production of India was increasing at a slightly more rapid rate than the railways and the coal-consuming industries. But these features were absent in the years after 1908. The exports of Indian coal diminished slightly; this was attributed partly to the large quantities of inferior coal sent out of India during the boom of 1908, but it could not have been entirely due to that reason. As for the imports, 'between 1881 and 1895 the imports of coal into India were almost stationary. From the latter year a steady decrease set in until 1909 when the minimum was reached. In 1909 largely owing to the high price of coal during 1908 the quantity increased'.¹ But the quantity continued slightly to increase even after this year. The exports still exceeded the imports but the margin between the two was materially diminished. Again as regards the percentage of the total annual consumption of Indian coal on Indian railways the proportion fell to 95 per cent from the 99 per cent of the latter years of the previous period, and this in spite of the fact that the railways were now consuming a greater proportion of the total output of Indian coal than they did before. 'Whilst the Indian coal consumed on railways has formed over 31 per cent of the total production during the period under review (1909-13), this being higher than the figure for the previous period 1904-08, and indicating that railway expansion has, if anything, outstripped the coal consuming enterprises.'² But the facts not only showed that the railways had outstripped the coal consuming enterprises but also that the railways and the coal consuming enterprises together were growing at a faster pace than the production of coal in India. It must be noticed here that Indian coal was handicapped by two facts in its competition

¹ V. Ball, *The Coal-fields of India*, revised by R. R. Simpson (1913). Chap. III.

² *The Quinquennial Review of the Mineral Production of India* (1909-13), p. 17.

with foreign coal. In the first place, it was not of the high quality required for certain industrial purposes and secondly, the high railway freights made competition very difficult in parts of India distant from the coal-fields. Thus there was very little difference in price—especially when the difference in quality was also considered—between Bengal and Welsh coal, in a western port like Karachi.

The causes helping the growth of the coal industry were the growth of communications and the growth of the factory industry. The large growth of output was due largely to the fact that improved machinery was widely coming into use throughout the industry ; still in many of the smaller mines very little machinery was used. The growth was also helped considerably by the change made in the conditions of the grant of mining leases and licences. The old rules regarding these were undoubtedly irksome and imposed unnecessary restrictions on the capitalists. The figures for the concessions granted before and after the change of rules are instructive. These were in 1899 only 60, but rose in 1904 to 189, in 1906 to 252 and in 1907 to 400.¹

The growth in the exploitation of the petroleum deposits of Burma was almost as rapid as in that of coal. The extraction of crude oil by rather primitive methods had been going on in these fields of Upper Burma for a very long time. Very little machinery was used and the fields were controlled by a very closely formed guild-like organization.² Up to 1887 exploitation by modern methods had not been tried in this industry at all. In that year two companies were started, to exploit the oil, equipped with modern drilling machinery. The beginnings were modest and in 1890 their production amounted only to 1,516,975 gallons. The Upper Burma deposits are the only important ones in India ; for they produce over 95 per

¹ Figures given by Sir T. Holland, *op. cit.*

² Dr. F. Noetling, *Petroleum Industry in Upper Burma* (1892).

cent of the total Indian supply. The production did not increase greatly for nearly a decade and it was not till 1896 that the hopes of finding an important supply began to be entertained.¹ The growth in production, however, was rapid after 1896. Even all this growth was not able to supply completely the needs of India and the imports kept on increasing steadily. The exports also of Burma oil were not at all considerable.

PETROLEUM INDUSTRY

—	1896	1900	1905	1910	1914
Gallons oil ...	15,049,289	37,729,211	144,798,444	214,829,647	259,342,710

The next important mineral industry of India is the manganese industry. This may be said to be the creation almost entirely of the twentieth century. For though manganese mining had begun in the Madras Presidency as far back as 1892, the production was still very small at the end of the nineteenth century; and the important deposits in the Central Provinces were not worked till 1900. At the very beginning, a strong impetus was given to the industry by the outbreak of the Russo-Japanese War. For this reduced considerably the supplies from Russia which were hitherto the most considerable of the world supplies; the rapid growth was also due to the great activity at this time in the steel trade in Europe and U. S. A.² The rise was rapid and the production reached its highest point in 1907 (when it exceeded 900,000 tons); and for a short time, from 1908-11, India held the position of the largest manganese producing country in the world. Following the depression in the

¹ E. H. Pascoe, *The Oilfields of Burma* (1912).

² A. H. Curtis, *Manganese Ores* (1919), p. 34. See also *Quinquennial Review of the Mineral Production of India* (1904-08) by Holland and Fermor, pp. 128-129.

steel trade in 1908 there was a depression in the industry. It recovered for a short time when there was another interruption in the Russian supplies. Manganese was raised in India entirely for export in the absence of a local steel industry. The industry employed in 1913 about 20,500 persons.

The gold industry of India was considerably older than the two above mentioned. The only important gold field in India is the Kolar field in Mysore. Attention was directed towards this field by the old Indian workings and about 1880 many companies were floated for the exploitation of gold in India. The expectations were very great in the beginning but they were doomed to be disappointed. 'All the companies floated with such extravagant hopes were moribund in 1885, and it was only a dying effort of the Mysore Company in that year that disclosed the richness of the reef . . . By 1887 the adjacent companies had resumed operations and from that time till 1905 the history of the field was one of uninterrupted progress and success.'¹ Since the latter date there has been a fall in the output owing to zones of lower grade having been reached. Till 1902 gold was the most important in value of the Indian mineral products ; after 1902 its place was taken by coal.

The other important mineral industries of India are the production of salt, mica and saltpetre. The first is a very important industry. The supplies are drawn from different sources such as sea, rock and lake. The Indian production is, however, not able to meet entirely the home demand. As regards mica India is the chief producer in the world. The industry, though not very important, employed nearly 18,000 people in 1913. Saltpetre, of which India had a practical monopoly, was at one time an essential ingredient of all high explosives but since the discovery of substitutes for it (about 1860) the industry has been in a stationary condition.

As regards the iron deposits of India, which exist in abundance, the only successful attempt to manufacture

¹ *Quinquennial Review of Mineral Production (1909-13)*, p. 85.

iron had been at the Barakar works on the Raniganj fields.¹ Other attempts had been numerous but all had failed.² During the first decade of this century Tata & Sons floated their company to produce iron and steel in India. They began working in 1911 but naturally their production by 1914 was not large.³

There had been, on the whole, a remarkable growth in the mineral production of India during this period. But compared with the needs of India it was as yet insignificant. This is shown by the fact that the total value of minerals and mineral products imported into India far exceeds the total value of those produced in the country. Not only was the development insufficient, but it was only one-sided. The six important mineral products of India were coal, petroleum, gold, salt, manganese ore and mica. Of these the first four are consumed by what have been called by Sir T. Holland the 'direct processes', and the last two were grown purely for export. There was an almost entire lack in India of the mining of metalliferous minerals. 'The principal reason for the neglect of metalliferous minerals is the fact that in modern metallurgical or chemical developments the by-product has come to be a serious and an indispensable item in the source of profit, and the failure to utilize by-products necessarily involves neglect of the minerals that will not pay to work for the metals alone. . . . A country like India must be content, therefore, to pay the tax of imports until industries arise demanding a sufficient number of chemical products to complete an economic cycle, for chemical and metallurgical industries are essentially gregarious in their habits.'⁴ It was by a skilful utilization of all the products, then, that European industry had been able completely to vanquish the very old established metal and chemical industries of India;

¹ E. R. Watson, *Iron and Steel*. Monograph: Bengal (1907).

² Ranade, *op. cit.*

³ Lovat Fraser, *Iron and Steel in India* (1919).

⁴ Holland and Fermor, *Quinquennial Review*, etc. (1904-08), p. 10. See also Sir T. Holland, paper on the *Mineral Development of India* before the first Indian Industrial Conference, 1905.

and as pointed out in the above extract the revival of these industries depended on the general movement towards development of industries in India.

After the large industries and the general production of minerals we may now consider another group of industries, i.e. the plantations. The history of all these, with the exception of the tea industry, is very chequered. The oldest of these industries, viz. indigo, had been almost stationary from 1860 to 1895. The efforts of German scientists had been directed for a very long time towards the preparation of synthetic indigo; some of these attempts had been successful, but it was not until 1897 that the first commercially manufactured indigo was placed on the market. The scare was enough to discourage planting over large tracts;¹ the two seasons just after 1897 happened also to be very unfavourable. Thus from 1897 dates the progressive decline of the indigo industry of India. The area under indigo began rapidly to diminish and the exports began to fall off. For though at first the amount of synthetically produced indigo was not large, it began rapidly to increase and was able to cut prices very low in its competition with natural indigo. The planters tried to strengthen their position partly by cultivating other crops and partly by attempting improvements in the methods of the cultivation and manufacture of indigo. But the decline in the industry could not be checked. The figures for the exports of indigo show how rapid this decline was. (These are a good index because almost all the indigo manufactured in India was exported; only a small quantity and that of very inferior quality was retained in the country.) The exports were in 1895-96 166,308 cwts. and in 1913-14 10,939 cwts.

The coffee industry had a brief period of prosperity from 1889 to 1896. But in 1896 Brazil, by then comparatively free from its political troubles, again began its production in full and prices resumed their decline.

¹ C. Rowson 'Cultivation, etc. of indigo.' Paper in the *Journal of the Royal Society of Arts* (1900).

Since that year the area under coffee has been steadily diminishing. At the same time the exports do not show the decline in any marked degree. The annual note on coffee (1909-10) has the following : 'While the area under coffee has been steadily diminishing since the season 1896-97, production as judged from exports, which account for the greater part of the crop, has fluctuated from year to year, a small crop alternating with a large one.' The exports were on the whole steady, showing only a slight downward trend. The area under the crop had on the other hand definitely decreased from 260,887 acres in 1900-01 to 203,677 in 1913-14.¹

¹ The indexes used above to measure the extent and progress of the indigo and coffee industry have been the area under cultivation and the figures for exports. The actual return of factories and the persons employed would have been obviously a better index. The entire lack of such statistics makes this impossible. The Government had been, indeed, publishing statistics of 'Large Industries' for a number of years. But they are unreliable and for purposes of comparison over a series of years entirely untrustworthy. The following extract from the 11th issue of the *Financial and the Commercial Statistics of India* will illustrate the difficulties. 'The statistics are incomplete even as regards large industries which ought to find a place in the tables and the figures given are sometimes of doubtful accuracy. . . . From 1901 no return has been made for any factory or establishment which employs an average of less than 25 persons throughout the year, and from 1902 the returns from Bombay Presidency exclude all establishments with an average of less than 50 persons. . . . The tabulated returns from 1901 are, therefore, not comparable with the figures for previous years, published in an earlier edition of this volume, when each reporting officer exercised his own discretion as to what constituted a large industry.' (Italics are mine). Later on the basis for the collection of the statistics was made 50 persons or over, all over India.

But even so we read a special *remark* against the statistics of the indigo industry. 'The table must be taken more as an indication of the extent of the industry than as a complete record.' As regards coffee, the Director-General of Statistics, Mr. O'Connor, says, 'It is difficult, however, to ascertain with accuracy the area, yield or condition of the coffee estates of Southern India, the planters being averse for some unknown and unconjecturable reason, to communicate statistical information relating to the industry.' (*Review of the Trade of India*, 1901-02, p. 21). The foreign trade statistics of India, on the other hand,

The tea industry, on the other hand, had been making steady progress throughout. In the world market for indigo, synthetic indigo had become the dominant factor in the twentieth century, in the coffee market Brazilian coffee had been controlling the market from an even earlier period, but in the tea market Indian tea had been improving its position and was now by far the most important factor. The growth of this industry had been made possible by the India tea steadily driving China tea out of the United Kingdom market. The change, indeed, was very complete. In 1866, of the total imports of tea into the United Kingdom only 4 per cent were Indian and the rest Chinese; while in 1903 of the total imports 59 per cent were Indian, 31 per cent from Ceylon and only 10 per cent from China. The increase in the tea area, which had been remarkable till 1895, continued. The greatest increases took place in 1897 and 1898. In the next two years the rate of increase was sharply checked and almost stopped in 1902. The production had also been increasing rapidly and the result of this huge increase in production had been a rapid reduction in the prices of tea after 1895. For a time, also, the United Kingdom demand was stationary. The result was a decrease in area between 1902 and 1906, and a depression in the industry. After 1906 progress was again resumed. The United Kingdom market began steadily to expand and an important and growing market had been found in Russia.

The plantations, as a whole, were now taking a smaller proportionate share in Indian industry. They were in a somewhat different position to the other industries. They were almost wholly European owned. They were exempted from the ordinary labour laws of the country and the planter had greater control over his labour force than the ordinary industrialist. These industries were partly agricultural and partly industrial, and all of them

are the most reliable and the agricultural statistics are somewhat better than those for large industries.

exported the greater proportion of their product. The tea and coffee industries opened up hitherto waste tracts, and their chief importance in the industrial progress of India lay in providing an occupation for a great number of labourers from the congested parts of the country.

The sugar industry of India was another of those industries which had a bad time in the nineties. One of the remarkable features of the foreign trade during the decade 1890-1900 was the enormous rise in sugar imports. The imports had been rising steadily for some time before this. They came, then, chiefly from Mauritius and Java. The Indian industry did not suffer at this time. It was only when the beet-sugar imports began to come in, especially after a protective tariff had been placed on them in America, that the real blow was struck at the Indian industry. Beet-sugar forced prices down extremely low and sugar refining in Indian factories became unprofitable.¹ The chief seat of this industry was the United Provinces and some districts of Bengal. Between 1895-1900 in the United Provinces over 180 of these small refineries had to close down and there were many closures in the Bengal districts, e.g. in Jessore.² A countervailing duty on these bounty-fed beet sugars was imposed but this did not help the industry greatly. It had been contended that the fall in the price of sugar would have no effect on the area under sugarcane or the price of *gur*.³ This expectation, however, was falsified and the area began to shrink. This shrinkage was chiefly due to the fact that, there being a general rise of prices, the cultivation of food-grains, cotton and other crops had become very remunerative. Sugar did not share to the same extent in the general rise of prices on account of foreign competition. Thus sugarcane cultivation was being abandoned

¹ S. M. Hadi, *The Sugar Industry of N. W. Provinces and Oudh* (1899).

² *East India (Sugar) Countervailing Duties Act*. Correspondence, etc. [Parliamentary Paper] 1901.

³ *Ibid.* Memorandum by Mr. Mollison.

in favour of other more paying crops.¹ Though the competition of beet-sugar first started the decline, it cannot be said that but for this the industry would have prospered. The very basis on which the industry rested was unstable. The unit of production was very small, the methods employed crude and wasteful. There was almost no machinery used in most of these concerns and the very fact that the sugar was manufactured from *gur* and not directly from cane-juice told heavily against the industry. One of the contributing causes of this decline was the refusal of the Government to give permission to extract rum from the molasses. The system of cultivation in India also was one of the obstructions to the revival of the industry.

Almost the same fate overtook the leather tanning industry of Madras; and from 1899 Madras, where exports of raw hides and skins had been insignificant hitherto, began to export them in increasing quantities. The decline was due to the discovery in America of the chrome processes of tanning. This, together with the application on a very large scale of machinery in the boot and shoe industries, created an enormous demand for raw hides and skins in the West. The prices rose very high and the tanner found it impossible to carry on his business profitably. There was another way in which the discovery of chrome-tanning processes affected Indian tanning. Before these processes were introduced, there was a large demand in foreign countries—especially in England—for the vegetable and bark-tanned Madras hides; but before using them the leather manufacturer abroad had to re-tan them. It was impossible to treat an already vegetable or bark-tanned hide by the chrome processes; this meant a serious diminution in the market for Indian tanned hides and skins.² Another adverse influence was the finding of the Committee appointed by the Royal Society of Arts that the Indian

¹ F. Noel Paton, *Sugar in India*, 1911.

² Chatterton, Monograph: *Leather* (Madras), and other provincial monographs.

tanned leather was unsuitable for the purposes of book-binding. Attempts were made at this time to introduce the chrome processes in Indian tanning but they had been mostly unsuccessful. There was during this decade, however, a small growth of the large scale tanning industry in the Bombay and Madras Presidencies—especially in the former. The two big centres were Bombay and Ahmedabad. The industry was on a much larger scale than the now decaying Madras industry and the unit might more properly be called a factory than a workshop. At the same time the methods used in the industry, except in a very few tanneries, were still crude.¹ The extent of this industry was, on the whole, small.

During these twenty years a considerable increase had taken place in that section of the industry which comprises the cotton gins and presses, the rice and timber mills, etc. Rice mills, which had been hitherto more or less confined to Burma, spread into India proper, notably in the Madras and Bengal Presidencies. The engineering and railway workshops, iron and brass foundries also grew rapidly. The growth in this class was due very largely to the extension of railways in India and to the introduction and extended use of cycles, motor-cars, tramways, etc. They also indicate a somewhat larger use than before of small machinery in ordinary operations, such as small pumps for lifting water, the introduction of small motors in workshop industries, where mechanical power had not been used before, and also the establishment of small flour or oil mills, etc. in many parts of India.

It is indeed in this direction of a slow spread of the use of improved machinery in various operations, the introduction of small motors where no power was used before, and the establishment of small local and isolated factories in industries in which no very complicated processes were required, that the real industrial progress,

¹ A. Guthrie, Monograph on the *Leather Industry* (Bombay), 1910.

whatever its extent, took place in India during this period.

An examination of the results of the industrial census of India taken in 1911 will prove the truth of this statement, as well as help to bring out the extremely small extent of modern industry in India. The definition of a factory was taken to be any industrial establishment employing on an average more than 20 hands. In all 7,113 factories were counted in the census. Of these 4,569, i.e. a little less than 2/3rds, used mechanical power in some form or other, while the rest did not make use of any mechanical power in their industrial processes. The total number employed in this industry amounted only to 2,105,824.¹ The industry was not only small, but its character also was very limited. Among the sixteen groups into which the industry was divided by the Census Commissioner the number employed exceeded 100,000 only in four groups.

These were :

	Persons employed
(i) Growing of special products, i.e. plantations, etc	... 810,407
(ii) The textiles	... 557,589
(iii) Mines	... 224,087
(iv) Industries connected with transport	... 125,117
 Total	 1,717,200

These four groups between them contain over 81 per cent of India's industrial population. But the groups are comprehensive and the idea conveyed is that of a rather varied industry. The correct impression will be conveyed by the enumeration of individual industries which employed, say, more than 20,000 people.

¹ The population of India in 1911 was about 315 millions.

INDUSTRIAL CENSUS (1911)

Industry	Persons employed	Industry	Persons employed
Tea Plantations ...	703,585	Brick and Tile factories.	46,156
	308,190		
Cotton ...	557,589	Flour and Rice Mills	42,374
Jute, hemp, etc. ...	222,319	Printing Presses ...	41,598
Collieries , ...	142,977	Indigo Plantations ...	30,795
Railway workshops.	98,723	Gold Mines ...	28,592
Coffee Plantations ...	57,623	Machinery and Engineering Workshops.	23,147

After these follow saw mills, stone and marble quarries, timber yards, iron foundries and petroleum refineries. These made up the whole class of industries employing more than 10,000 persons. It is easy to see that the first four were the only industries at all important. On the plantations, a large proportion of the persons employed were engaged in purely agricultural work. The one-sided nature of the development of mineral industries has already been explained. Thus of the factory industry proper—i.e. apart from mineral industry—there remain, after cotton and jute, only the accessory industries, i.e. workshops, foundries, etc., and the class of gins, presses and rice and timber mills. Indeed these latter two classes, if we also added to them the class of flour mills, oil mills, etc., were, after the large textile industry, the only considerable modern industries in India. The extent of industries in India at this time was extremely limited and it should be noticed that industries in which complicated processes were required are markedly absent.

Turning now to the condition of labour in Indian factories, we find that the Factory Act of 1892 remained

in operation till 1912. When the Act was passed in 1892, general satisfaction had been expressed as regards its provisions. Nearly a decade after the passing of the Act a factor was introduced into the hours of labour which could not then have been taken into account. This was the introduction of electric light into the factories. Its first introduction into the Bombay industry coincided with a big boom in the yarn market. This made the working of the mill for excessively long hours profitable, and it had been made possible by the introduction of electric light. The Committee of 1891 had considered the sunrise to sunset hours as normal in India and thought them to be not excessive. But these calculations were now upset. The hours worked in the Bombay industry during the 1905 boom were extremely long, sometimes lasting from 5 a.m. to 9 p.m.; and on an average a $14\frac{1}{2}$ hours day was worked in the industry during this period.¹ Attention was attracted towards these excessive hours by articles in the press, and the Government appointed a Committee to enquire into the condition of textile factories labour; the report of this Committee pointed to the necessity of a more detailed and a wider enquiry. Another Commission was accordingly appointed to consider the whole question of factory labour, and presented its report in 1908. One of the most interesting facts brought to light in this report was that in many cases the provisions of the Act of 1892 were openly disregarded. In the Upper Provinces, South Madras, Bengal and Punjab cotton mills the children worked the same number of hours as the adults; also quite a number of children under 9 years of age were employed in the factories as half-timers. In this connection, 'one manager of a mill (Calcutta jute mill) stated that he did not send the children to the doctor to be certified prior to employment as he had a shrewd suspicion that most of them would probably be rejected; while he frankly admitted that the mills made no change whatever in their system consequent on the

¹ *Report of the Textile Factories Labour Committee (1907).*

amendment of the factory law in 1891'.¹ The Khan-desh gins, which had been brought under the law in 1891, were a good deal better now; but in the smaller gins and rice mills in other places the hours were still very excessive. Thus in the Gujarat gins, not under the Act, 15 to 18 hours a day were sometimes worked. These factories, as they depended entirely on the supplies of rice and cotton, worked spasmodically; the pressure during the rush season being very great and consequently the hours excessive. The hours of adult male labour were the worst in the smaller up-country centres. These hours were mostly to be found in the cotton industry. The North India centres, namely Agra, Delhi and Cawnpore, were specially bad. The average hours worked were over 13 $\frac{1}{2}$. In the Calcutta jute industry the hours were not excessive, except for the weavers who sometimes worked a 15 hour day; the hours of children were excessive everywhere and the physique of the factory children compared unfavourably with those outside. But the point most keenly discussed at this time was the regulation of the hours of adult males. The majority of the Commissioners, though they did not recommend a legal regulation on this point, found that the labourers suffered from these excessive hours; and they provided for a regulation of the hours of women and children which, in their opinion, would automatically reduce the hours of men. Dr. Nair differed from them on this point. A large portion of the evidence showed the advisability of short hours. The excessive hours were defended, chiefly, on the score of the 'ingrained habit' of the Indian worker to loiter during working hours. The evidence showed, however, that the habit was itself a necessary corollary of excessive hours. In this connection a most interesting experiment was carried out by the Cawnpore Elgin Mills. These mills, at one time, worked a 15 hour day, but they found it uneconomical and wasteful. So they brought the hours

¹ Report of the Indian Factory Labour Commission (1908), p. 17.

gradually down to 12 and found that the gross outturn was not diminished, that the men still earned the same pay and that the work was better done.¹ A similar experiment was carried out in the Buckingham Mills in Madras, where the experience of the manager was that 'while they had reduced the working day by three-quarters of an hour (i.e., from 12½ to 11¾) there had been no decrease in the total production.' He attributed this to better machinery, better supervision, and increased application of the operatives.² Evidence to the same effect was given by Mr. (now Sir) Bezonji Dadabhoy Mehta, the experienced manager of the Nagpur Empress Mills.³ The shorter hours were then more economical. In Dr. Nair's opinion not only did the long hours induce loitering and bad work but they were also responsible for the periodic holiday that the labourer took in the country and also his frequent absence from work. These excessive hours were physically very harmful to the workers and they were early 'used up.' Dr. Nair pointed to the remarkable absence of any elderly men in the factories in support of this contention. They also restricted the possible labour supply in the mills, for only those who could physically endure the strain could be employed.⁴

The excessive hours in the factory industry, then, limited the supply of labour forthcoming. The same might be said of the deplorable and insanitary conditions in some industrial centres. For these also discouraged the movement of labour into these centres. There was at this time in India a loud complaint from all the manufacturing establishments of the scarcity of labour. A difference must be made here between two kinds of scarcities. There were certain establishments which

¹ *Factory Labour Commission*: Minutes of Evidence. Evidence of Mr. Bevis of the Elgin Mills.

² *Ibid.* Evidence of Mr. Alexander. The factor of better machinery somewhat vitiates the value of this experiment.

³ *Ibid.* Evidence; see also his paper before the 3rd Indian Industrial Conference, 1907.

⁴ *Ibid.* Evidence of Mr. Freemantle.

suffered a chronic scarcity of labour. This was generally felt only in the industries or factories where the working conditions or housing conditions were utterly bad, or where the work was particularly strenuous. Thus Foley¹ found that in Bengal there was chronic scarcity only in the cotton mills of Calcutta, where the hours were very excessive and wages much lower and work much harder than in the jute industry, in some jute mills at Howrah which were in a terribly congested locality and where the housing conditions were particularly bad, and in the coal industry for coal cutting. In the coal industry it should be noticed that there was no shortage at all of surface labour. There was also a chronic shortage in many of the United Provinces centres. This is really surprising when we consider that the districts, surrounding these centres, themselves supplied a great portion of the emigrant population of India and also a very great portion of the labour force for the Calcutta industries. This chronic shortage was due, in most of these centres, to the conjunction of two factors. Very bad working conditions; and very bad housing conditions. The chronic shortage was, then, due to the conditions obtaining in the industry and not to any other factor.

But there was another phase of the question of the 'scarcity of labour'. This was the periodical scarcity. The only industries which did not feel this periodical scarcity were (i) those in which particular care was taken of the labour supply, or (ii) those which provided kinds of work specially liked by the Indian labourer, or (iii) seasonal industries which did not clash with the busy season of agriculture. The Giridih coal-fields afforded a good example of the first kind. Here special care was taken of labour and there was never any shortage. The same was the case with Calcutta jute mills which provided good lines for their coolies. Then again, there was never any shortage of labour for railway construction, which was particularly liked by the Indian labourer. The jute pressing industry provides

¹ B. Foley, *Report on Labour in Bengal* (1906).

a good example of the third kind ; and here also no scarcity at all was felt.

But a periodical scarcity was felt in all the other industries. The period, however, at which the scarcity was felt differed from one place to another. This depended chiefly on the localization of the industry. It is difficult to make a generalization, but it may be said that in an industrial centre surrounded by rural districts from which it drew its labour supply this shortage was felt at the harvest season, while in an industrial centre whose labour supply was drawn from distant districts the scarcity was in the hot weather or the marriage season (both these coincided). Thus shortage in Cawnpore was particularly acute at the time of the movement of the crops ; in Sholapur the scarcity was only felt at the harvest season and so also the labour of the coal-cutters, who were generally the aboriginal Santhals, was specially scarce during the harvesting and cultivation of their rice crop.¹ On the other hand, the periodical shortage was felt in both Bombay and Calcutta in the hot weather and marriage season. The first kind of scarcity explains itself. It is obvious here that the labour has not yet severed its connection with the land. The labourer is still partly an agriculturist ; most probably he owns a plot of land or has a share in one, and goes home to assist his family in harvesting the crop. This is a definite and marked stage in the industrial development of every country. This sort of periodical shortage could not be removed until, with the growth of a large industry, a definite factory population was created. Labour in Calcutta and Bombay marks an advance on this stage. The labourer here, at least in Calcutta, is a member of an agricultural family, but he has severed his connection with the land, in so far as he no longer regularly works on it. Here we have to differentiate between Calcutta and Bombay labour. The Calcutta labourer, who generally came from the

¹ E. A. Horne, Industrial Development and the Labour Question : *Bengal Economic Journal*, April 1918.

Upper Provinces, did not bring his family with him to Calcutta. Therefore he periodically went home. The severance from the land both of Bombay and Calcutta labour was first induced by the distance from home. In the case of Bombay labour, however, the severance was almost complete ; for the Bombay labourer came to the city with his wife and often the whole family would come up to Bombay to work in the factories. But even the Bombay factory worker was not completely an urban worker. He kept up his connection with his native village, periodically visited his home, and generally retired there in his old age. He also sent his wife for child-birth to his native village. There is no obvious explanation for this. For the labourers do not seem to have any direct connection with the land. The following are a few extracts from the evidence before the Factory Commission on this point. One witness stated, ' The elderly men retired to their village and could not return to mill-work because their constitution was generally shattered ; generally they had not saved anything and had to live by cultivating the soil '.¹ Another stated, ' The elderly people retired to their homes when they reached 40 or 45. If they had saved money they followed a small trade, and if not, they remained in Bombay and their children kept them '.² The most reliable evidence, because that of one of the operatives themselves, gives this : ' Very few of the Bombay operatives are settled in Bombay ; almost all of us have our homes in Konkan and go there once every year or two for a short visit. When a man is too old to work he does not return to Bombay, but passes his old age at home, being helped by remittances sent from Bombay by working members of his family '.³ The reliance on savings or remittances in old age shows that the operative did not own a share in land ; he did not go to the country

¹ Fact. Lab. Commission. Minutes of evidence. Evidence of Mr. Keluskar.

² Ibid. Evidence of Mr. Nare.

³ Ibid. Evidence of Bhiwa Bawaji. (Italics mine.)

for agricultural work but for a holiday. The severance of this worker, economically, from the land is certainly complete. There must have been, therefore, some strong reasons which prevented the labourer from settling definitely in Bombay ; and it seems probable that but for the very bad housing and sanitary conditions in that city a definite, permanently settled factory population would now have been developed there.

The periodical 'scarcity of labour' was, then, a natural result of the phase of industrial development through which India was passing, a result which was, however, greatly accentuated by the conditions obtaining in Indian industry.¹

¹ See B. Foley, *op. cit.* chap. VII.

Mr. Foley finds that 'the present state of affairs in Bengal cannot be said to be inconsistent with the conditions of life of the factory operative and the agricultural classes.' This was generally painted by the manufacturers as a highly anomalous state of affairs.

CHAPTER IX

RAILWAYS AND IRRIGATION

THE correlation of the railway systems and the canal systems in India is not the same as in most other parts of the world. Almost everywhere else, they are merely the two branches of a transport system. The commercial revolution in England, finally brought about by the extensive railway construction, was begun by an English system of canals. This was also the case in many Continental countries. In India, however, canals are rarely built for the purposes of transport. Inland water transport in India is carried only on the big rivers, and even on these the parts navigable throughout the year are of a comparatively short length. Of the canals, the only systems on which navigation was possible to any great extent were some of those in Bengal and Madras.¹ The obvious connection, then, between the canals and railways did not hold in India.

But they were inter-connected in other ways. Firstly, the Indian Government soon discovered that private enterprise could not be relied on to carry on the work of railway and canal extension in India; so a very important department of the Government—the Public Works Department—took charge of both these works of public utility. This was the work of Lord Dalhousie. Irrigation and railways were again connected in another way. For the original reason given for a rapid extension of both these was the same, i.e. protection against famines; and the respective merits of these two for this purpose was the subject of a very keen controversy, carried on during the last three decades of the 19th century.

¹ 'Except in the Deltas of Krishna and Godaveri there is no system of navigation in India, which is of any great advantage to the people.' *Report of the Indian Irrigation Commission (1901-03).* Chap. XVIII.

SECTION I.—*Railways*

The original policy of the Government in the construction of railways was the policy of guaranteed companies. The construction was carried on and capital found by private companies, who were guaranteed a 5 per cent interest on their capital; the surplus profits over this 5 per cent, if any, were to be divided equally between the Company and the Government. The Government in these contracts reserved to itself the right to purchase the line at the end of 25 or 50 years. The construction of railways in India was carried on on this plan till 1869; but it was found to be extremely uneconomical, and every year the Government had to pay to the companies a substantial sum on account of the guarantee. In the beginning it was supposed that the railways would begin to pay over 5 per cent within a very short time of their construction, but this was proved to be an unwarranted supposition. The railway companies had also no inducement, on account of the guarantee, to be economical in their management.¹ The original plan having been found wasteful, it was given up, and from 1869 to 1879 the Government tried the experiment of railway construction entirely on its own account. From 1879 private companies were, however, again allowed in the field. These new companies were guaranteed no interest, but in most cases they were financially assisted by the Government, and in almost every case they were given land free of cost.² At the same time the Government carried on railway construction on its own account, and it was also undertaken by the Governments of some Native States. Thus, through all these agencies the extension of railways had been, during this period, pretty rapid and continuous. By 1914 the Government had acquired all the railways built under the old guarantee system. The

¹ *Report of the Select Committee on Public Works*, 1879; also Evidence before the Committee of Major-General Dickens, Julian Danvers and others.

² *Report of the Committee on Indian Railway Finance and Administration*, 1907.

extension by the private 'assisted' companies since 1879 had not been large, and in 1914 the major portion of the railway lines in India was State-owned.

RAILWAY SYSTEMS IN INDIA IN 1913-14

Total mileage of railway open for traffic	34,656	
Total mileage of State lines worked by Companies	18,680	25,911
Total mileage of State lines worked by the State	7,231	total State- owned.
Total mileage of Native State lines worked by the States and by Companies	3,396	

The rest was held by small private companies.

The first plans for the extension of railways were sketched by Lord Dalhousie, who first sketched the routes for the main trunk lines. The construction of these trunk lines followed mostly the lines laid down by Lord Dalhousie. The system, on which railway construction was begun in India, had not taken any account of the immediate earning of dividends. The development of railways, therefore, was peculiar. Attention was not directed to connecting contiguous trade points, and to exploring thoroughly the trade of each district through which the railway passed by a systematic construction of feeder lines. Instead, the scheme followed was to construct grand trunk lines traversing the length and breadth of the country, and connecting the big cities of the interior with the big ports—Calcutta, Bombay and Madras. By 1875 most of the big centres were so connected. The construction of these trunk lines was mostly the work of the guaranteed companies. The routes from the ports were generally sketched with the intention of traversing the important agricultural tracts of the interior, so as to facilitate the export of agricultural produce. From Bombay, for example, Ahmedabad and the Gujarat cotton tract, Nagpur, with the Khandesh and Berar cotton tract, and Sholapur,

with the adjacent Karnatic cotton tract, were reached before 1870. From Calcutta, the first extensions were towards the rich but congested tract of the North-West Provinces and the coal-fields near Raniganj; the route taken to the big cities of the north being through Mirzapur and Allahabad to Cawnpore and Delhi. Bombay and Calcutta were connected via Jubbulpore in 1870; Bombay and Madras in 1871. Calcutta had been connected with Delhi in 1867, but for a long time Bombay and the cities of North India were not directly connected. This helped greatly towards establishing the position of Calcutta in the export trade of the products of North-West Provinces (now United Provinces). One of the important routes not served for a long time by a railway was the route between Karachi and the Punjab, a fact which delayed the rise in importance of Karachi as a port. The most important grain tract not reached early by railways was Chhattisgarh. This was not reached till the eighties, and up to that time it showed the extraordinary effects of the lack of proper means of communications on prices and the nature of scarcities. The Karnatic cotton also had not been properly reached by the extension of the railway to Raichur; and the important centres of Belgaum, Dharwar and Hubli were not served by a railway till the late eighties. But, on the whole, the spread of railway communications was quick in India, and the most important centres were connected together quite early.

Protection against famines was one of the main reasons for railway extension in India; and no doubt the presence of railways helped greatly to lessen the effects of a famine. The Famine Commissioners (1880) found, after comparing the mortality statistics, that the greatest mortality due to famines was found in those tracts, in which transport facilities were worst. By 1880 railway construction had gone far enough to afford sufficient protection to most of the tracts liable to famines. Protection against famines was, however, not the only reason for railway extension. An early

Committee on railway construction gave the following reasons why it should be pushed on vigorously in India :

(i) Famine prevention ; (ii) development of internal and external trade ; (iii) growth of more remunerative crops in tracts reached by railways ; (iv) opening up of coal-fields ; (v) improvement of the economic condition of the people.¹ This Committee also, like all Committees on railway construction in India, found that there was great need for carrying on the work of railway construction rapidly. The chief difficulty in following this policy was the bad state of Government finances in and after the eighties, which made wholesale borrowing for the purposes of railway extension a dangerous policy to follow. The Public Works Committee (1879) had recommended the policy of borrowing for railway purposes only, when it was expected that the railways would begin to pay within a short period. But the policy was reversed within a few years after the Committee's report, and the Government began to use even the Famine Insurance grant for this purpose. This policy of the Government, of pushing railway construction at all costs, was condemned in many quarters, and Mr. Gokhale expressed a widely prevailing sentiment when he said, 'I do not mean that the railways themselves are to be condemned, but the manner in which the Government has been going on for more and more railways, starving more useful things, is an objection.'² In spite of all financial difficulties railway construction was, then, steadily carried on throughout the period.

There were two factors which mainly affected the railway policy in India. The first was the lines on which the construction of these railroads was sketched, and the second was the question of management. The first factor by the rapid construction of the trunk lines encouraged through trade between the important centres—especially between the internal marts and the

¹ *Report of the Committee on Railways in India (1884).*

² Evidence before the Welby Commission, 1896-1900.

big ports. Railway construction at this time looked more to the development of the foreign trade of the country than to a growth of the internal trade. In the absence of any large industries in India at the time, this policy was perhaps natural, but it left a permanent mark on the nature of the freights charged, which to a great extent hampered the industries of India at a later date. Indeed, this policy was not changed at all till 1914. The result of this historical reason was that (in the words of the Industrial Commissioners) 'generally speaking, favourable rates for raw produce moving to the ports have resulted.'¹ Further, the rates have been particularly hard on the industrial centres in the interior of the country, and have resulted in a concentration of industries at the ports. The freights were specially felt by the coal industry.² The other obvious effect was that these differential rates somewhat helped the port industries and the foreign industries in their competition with the industries of the interior.

The question of management was rather peculiar. Though the railways, especially since the beginning of this century, have been mostly State-owned, the bulk of them have been managed for the Government by a number of different companies. Thus the advantages of a common railway policy, generally to be expected from single ownership, were not obtained in India. A meaningless competition between the different railway companies for traffic has resulted, which is distinctly harmful to the general interests of the country. Again the companies themselves have not been allowed a free hand, and large supervisory powers were given to Government engineers, which obstructed the smooth working of the railways. The result was so harmful that Mr. Robertson definitely stated it as his opinion that railways should either be completely State-managed or

¹ *Report of the Indian Industrial Commission 1916-18, Chapter XIX.*

² T. Robertson (Special Commissioner), *Report on the Administration and Working of the Indian Railways, 1903.*

completely company-managed.¹ In the scramble for foreign trade, and by reason of this policy of dual management, there was one very important function which the railways did not fulfil. They almost entirely neglected the question of the development of local industries along their lines.²

The equipment of the railways, i.e. their rolling-stock, etc., was found to be sufficient for the purposes of trade till the beginning of the twentieth century, but after that, with the growing volume of external and internal trade, it was found difficult to cope with the traffic. The shortness of rolling-stock sometimes had unfortunate results, such as the inability of the railways to carry all the food offered to them from Central Provinces to Gujarat in the 1899-1900 famine. From 1905 onwards this difficulty became specially acute. The large increase in traffic, especially in grain, coal and manganese ore, contributed largely to this result; and a large increase in rolling stock and the addition of crossing stations, sidings, etc., were advocated.³ But sometimes this result was due to causes outside the control of the railways. In places the traffic was so one-sided and was concentrated within so short a period, that it was bound to become congested during that period. This was the state of the Punjab exports of wheat through Karachi and also largely of the riverine traffic of Burma rice.⁴

The more direct effects of railway extension were a levelling of prices, especially those of food-grains, throughout India, the growth of a large export trade in raw agricultural produce, and, in a certain measure, the extension of the cultivation of crops intended for export; a large impetus was also given to internal trade. The railways were also instrumental in helping

¹ Mr. Robertson's Report, Chapter I.

² *Ibid.* Chapter III.

³ Report of the Committee on Indian Railway Finance and Administration, 1907.

⁴ F. Noel Paton, *Burma Rice*, 1912. See also his *Indian Wheat and Grain Elevators*.

the growth of Indian industries, especially coal and cotton. The whole problem of the coal industry, for example, was that of carriage from the pithead to the place of consumption. In this matter of industrial development, however, certain factors, detailed above, prevented the railways from pushing forward the growth of industries in India to the same extent as they would ordinarily have done.

Hand in hand with the extension of railways in India, went on the extension of metalled roads. The policy of trunk lines necessitated the construction of good roads, if the railways were to serve any useful purpose. The extension of roads was as rapid as that of railways, and road construction affected the village life of India rather more directly than railway construction. The road increased the importance of the weekly market in the village economy, and also the importance of local fairs. At the same time the expansion of railways made possible the distribution of foreign goods throughout the country with the help of these markets and fairs. The extension of roads helped also to break down the self-sufficient nature of the village, and had an important effect on the nature of the village cultivation. Localization to a certain extent was now possible, at least among an adjacent group of villages. Thus this spread of communications had a very large share in the break-up of the compact character of the village community.

SECTION II.—*Irrigation*

While the construction of railways was a new method of fighting famines, irrigation was a very old one. The grand 'anicut' of the south, some of which are of great antiquity, bear testimony to this; so also do the many works of the Mughal emperors on the Ganges and the Jumna; while the inundation canals of Sind and the tanks, the wells, the dams and field-embankments, which were to be found in all parts of the country, showed that the people of India took great care of the water for their crops. The development of irrigation in India under

British rule followed the lines indicated by the works of the old Indian rulers and the practice of the Indian cultivator. The application of modern engineering methods made this development possible on a larger scale than ever before.

The East India Company, after it had been established in India fairly securely, devoted some attention to this question. The first work undertaken was the restoration of old works which had fallen into neglect, viz., the East Jumna and the West Jumna canals, and the Kaveri and Koleroon anicuts. There were also a few new irrigation works constructed; the Ganges Canal was built, and the Godaveri anicut—the work of Sir Arthur Cotton—was also completed during this period. The policy of the extension of irrigation works in these tracts was continued even more vigorously after the Company's rule came to an end. The works were always built by the Government itself. The method of private companies was tried but failed disastrously.¹ The value of irrigation in times of famine has always been universally recognized, and the extension of irrigation, as far as possible, has been always one of the main recommendations of all Famine Commissions. The great works undertaken by the Government since 1860, except for the completion of the Kistna anicut, have all been in the north. These have been the canals of the Ganges, Jumna and their tributaries and large works on the Punjab rivers. Up to 1880 progress had not been sufficiently rapid, a good deal of money having been thrown away on a few hasty projects. The Famine Commission of 1880 recommended a definite programme of works, and by 1895 most of these were completed. These were the Sutlej and the ²Chenab Canals in the Punjab; the completion of the Lower Ganges and the Betwa Canals in Upper Provinces and the completion of the line of navigable canals between Cuttack and the Hooghly.² The Commission of 1896 also drew up a

¹ *Vide* the notorious example of the Orissa Company.

² *Report of the Famine Commission, 1896.* Chapter VII.

definite programme, but the lines on which the work was afterwards carried out were laid down by the Irrigation Commission (1901-03). The big projects carried out after 1903 have been mostly in the Punjab. There has been, on the whole, a fairly steady expansion of the total amount of irrigation works in India.¹

The major works were mostly 'productive.' There has been adopted in India a two-fold division of the irrigation works : the 'productive' and the 'protective.' The productive works were those, in which the construction of a canal would enhance the area under cultivation, or the value of the crops, to such an extent, that the payments made for water would yield a handsome rate of interest on the cost of construction ; the protective works were those which did not pay much, sometimes not even their working expenses, but which it was absolutely necessary to construct for the protection of the tract against famines. The major works were generally productive.² The productive works were mostly those in the Ganges and Indus basins, the Sind inundation canal systems, and the big river delta works of the Madras Presidency ; while protective works had chiefly to be undertaken in tracts like the Bombay and Madras Deccan, Bundelkhand, etc.

Not only did the construction of irrigation works not pay everywhere, but there were definite limitations to

¹ *Report of the Irrigation Commission* (1904). Chapters I and IV.

² This is not strictly accurate ; for some works in Bombay Deccan and Bundelkhand, which did not pay, also came under this class.

The Punjab major works were rather peculiar. A large and well-defined portion of these provided irrigation for lands which had hitherto been considered waste ; and by the construction of these works an unpopulated tract became very fertile and prosperous ; an effect comparable to the result of the drainage of the Fen districts of Cambridgeshire and Lincolnshire. The original idea of the scheme was Colonel Wace's but the main items of the scheme were sketched by Sir Denzil Ibbetson in 1890. The work had gone on since then and the result of the first Canal Colony—the Chenab Colony—was so good that the Government were encouraged to extend similar works largely in the Punjab.

the extension even of 'protective' works. In this connection the Irrigation Commissioners remarked: 'We are convinced that there are many parts of India, where the utmost use of every possible means of irrigation will fail to afford complete protection against the failure of rainfall.'¹ The development of irrigation, which had thus taken place in India, benefited chiefly only certain parts of the country. The Irrigation Commissioners divided India into three parts according to the nature of their soil, (i) Alluvial; (ii) Crystalline; (iii) Deccan Trap. They discovered that, while nearly 25 per cent of the alluvial tract was irrigated and 15.5 per cent of the crystalline, only 3.2 per cent of the Deccan trap area was protected by irrigation. The bigger rivers all flowed through the first two, but, on account of the evenness of the surface, canal construction was easiest in the alluvial area. In the crystalline tract, which was particularly suitable for tank storage, this was the most suitable form of irrigation. But in the third the absence of big rivers and the nature of the ground made canal construction extremely difficult, and tank construction, wherever possible, extremely costly. Thus the scope of the extension of the big irrigation works by the State was restricted, and the utility of such works also could not be extended equally to all parts of the country.

The works constructed by the State, however, did not occupy the whole field; in 1903 only 42.2 per cent of the total irrigated area was watered by the State works, and the rest by private works. Of these private sources, the most prominent means were the tanks, wells and field embankments. There is no reliable data as to the extent of the increase of the area irrigated from these private sources, but the Irrigation Commissioners estimated it to be considerable. Here also it is to be observed that the first two tracts were the most benefited. In the Deccan trap area, the only important method of irrigation was by well-construction. On account of the depth of the sub-soil water in the tract, and the nature of

¹ Irrigation Commission Report. Chap. II.

the ground, the boring of a well was very costly here ; but, once built, the well was much more durable than in other parts. Field embankments were used for the purpose of retaining rain-water in the field, as well as for preventing the erosion of the soil.¹ The uses of all these means were well understood and their extension carried out by the cultivator, whenever his means and the circumstances permitted. The encouragement of a further extension of these private sources of irrigation by liberal allowances of the 'takavi' grants was strongly advocated by the Irrigation Commissioners.

Irrigation was not always an unmixed blessing, and, in the absence of a very good drainage system, water-logging and malaria often followed. In some of the earlier built canals, the evil not having been realized, sufficient attention was not paid during the construction of the canal to the drainage system of the land round about. In the United Provinces and Punjab, water-logging was often accompanied by the rising to the surface of a saline efflorescence called 'reh', which made the land unfertile. A good system of drainage, and care taken before and during the construction of a canal, were the only remedies against this evil.

The great advantage of irrigation was that the danger from the vagaries of the seasons was very greatly minimised by it. When the immense effect of a famine in India is taken into account, the value of this will be readily realized. Irrigation thus not only made directly for greater prosperity, but prevented almost all the bad effects of famine or of the fear of famine. Its most important beneficial effect was that it encouraged agricultural improvement. It encouraged the cultivator to sink his capital in the land by taking away the fear of an uncertain rainfall. The contrast in the methods of cultivation in the irrigated tracts and in those which were not so protected was very marked. One of the best

¹ Sometimes these were of a considerable importance. For example the system of 'Bandharas' in the Khandesh and Nasik Districts of Bombay Presidency.

instances of such a contrast was that between the standard of cultivation in the area irrigated by the Nira and Mutha Canals and the standard in the other parts of the Bombay Deccan. Further, it became necessary for the cultivator to go in for the more remunerative crops like sugar and cultivate highly, if he wanted to pay the water rate, the extra rent, etc., on a piece of irrigated land. Thus these two factors, a comparative steadiness of return, and the high rents and other charges, induced the cultivation of the more remunerative and specialized crops, and made cultivation more intensive. The peasant could not make cultivation of ordinary food grains in the usual way, for family consumption, pay; he had to grow a highly priced crop intended for the outside market—Indian or foreign. The effects were the same whatever the crop—whether wheat in the Punjab or sugarcane in the Deccan. It helped the movement of commercialization of agriculture, and very definitely encouraged the tendency of growing for the market as against growing mainly for home consumption.

TABLE FOR THE YEAR 1913-14

Total area cropped	...	219,191,773
Area irrigated	...	46,836,019
Area irrigated by State works	...	16,959,455

CHAPTER X

GROWTH OF TOWNS.¹

DR. CLAPHAM says 'the best general test of the industrialisation of a nation's life under modern conditions is the rate and character of the growth of its towns.'²

Some light, therefore, would be thrown on the recent industrial development of India by an examination of what the rate and character of the growth of urban population were in India.

Though we have no statistics to prove it, it is well-known that the urban development of India was, considering the state of industrial progress, far advanced. We know, for example, that in Clive's opinion the city of Murshidabad was in his day more populous than London: and that North India and Bengal at this time contained many big and populous cities. Again, we have no reason to suppose that the urban population of India was in any way growing between 1800 and 1872. The only cities to which any growth at this time can be definitely ascribed were the ports of Calcutta, Bombay and Madras, and a few places in the interior, like Cawnpore; but, on the other hand, there was certainly a great decrease to be accounted for in the population of a large number of old capital towns, e.g., Dacca, Murshidabad, Lucknow, Tanjore, etc. Indeed, considering that modern industry was almost non-existent in India at this time, and that the extension of transport facilities was not yet largely advanced, it seems more probable that the percentage of the urban population in India was slightly bigger at the beginning of the century than in 1872. In 1872 the percentage of urban population was

¹ This chapter is based almost entirely on the reports, Provincial and Imperial, of the different censuses.

² J. H. Clapham, *Economic Development of France and Germany (1815-1914)*. 1921. P. 53.

8.7 per cent: it seems, therefore, safe to put the proportion at the beginning of the century at least between 9 and 10 per cent. In the Western countries the percentages of the urban population towards the beginning of the nineteenth century were: England and Wales 21.3, Scotland 17.0, France 9.5, Prussia 7.25, Russia 3.7, U.S.A. 3.8.¹ We might then conclude that urban development in India had progressed at the beginning of this century at least as far as it had in France.

The nature of the population of these towns has already been described. For an estimate of the population of India, the first available statistics are those of 1872. The results of the 1872 census itself are of a somewhat doubtful accuracy; but the later censuses were fairly accurate. The chief defect in the statistics of urban population in India is that the definition of a 'town' has varied from census to census. Not only this, but the provincial superintendents of the census each interpreted this definition in his own way. Generally speaking, a town was defined as any place containing over 5,000 inhabitants, or any place of over 2,000 inhabitants with definite urban characteristics. At the same time many places even over 5,000 which were considered to be merely large villages were left out. It is, therefore, in the group of towns of under 10,000 that the statistics are most unreliable. The difficulty felt in all countries, of a constant shifting of civic boundary, is also met with in these statistics. On the whole, however, for broad generalizations and comparison in big groups the statistics are quite reliable.

Again it might be pointed out that there is a certain defect in treating these urban statistics for India as a whole. For here there are sharp differences. In Bengal Presidency the proportion of the urban population to the total is only 5 per cent, while in Bombay Presidency it rises to over 17 per cent. Unfortunately, the arrangement of provinces at present is so haphazard that none of them present, as a whole, any entirely homogeneous

¹ A. F. Weber, *Growth of Cities in the 19th Century*, 1899.

features. The contrast between different economic spheres is even sharper; for example on the plateau of Chota Nagpur only 3 per cent of the population live in towns, while in the populous province of Gujarat nearly one-fifth are town dwellers. But if we leave aside these extreme cases the proportion is in most parts of India between 8 to 12 per cent of the total population; and even though the proportion may vary, the nature of the town population and the causes governing its growth or decay are the same everywhere.

The census authorities have divided the towns into various classes, but it is unnecessary here to adopt their classification in full.¹ We would suggest a three-fold division. The class of small towns, i.e., towns of a population of 20,000 or less; another of intermediate towns, i.e., with a population between 20,000 and 50,000; and that of large towns or cities, the limit of which may be placed in India at 50,000 and over. In the case of small towns, the limit at 20,000 helps to eliminate very largely the statistical inaccuracies in the class of very small towns. The proportions of urban population to the total at the time of the different censuses were as follows:—

1872	...	8.72	per cent.
1881	...	9.41	"
1891	...	9.46	"
1901	...	9.88	"
1911	...	9.42	"

The table fails to suggest any considerable movement in either direction. The only increases, in the proportions, of any account, are in the decades 1872-81 and 1891-1901. Between 1881-1891 the proportion is stationary while between 1901-1911 it has actually fallen.

[The reports of the latest census (1921) make it clear that this decade, even though it shows a small increase, cannot be said to have brought about any considerable change.]

On account of the inaccuracies in the census of 1872, it is doubtful whether the increase in the decade

¹ See table at the end of the chapter.

1872-1881 is really as large as it is shown to be. Thus the urban population has grown just a little more quickly, if at all, than the total population of the country.

This same steadiness of proportions is discovered when we come to see whether there has been any change as regards the character of the urban population—any variation in the proportion of the different classes. This also has been almost entirely steady.

PERCENTAGES OF THE POPULATION OF THE THREE CLASSES OF TOWNS TO THE TOTAL URBAN POPULATION.

No. of inhabitants	1872	1911
20,000 and under	47.3	47.4
Between 20,000 and 50,000	18.3	18.7
50,000 and over	34.4	33.9

Here there is no corroboration found, if the period be taken as a whole, of Levasseur's proposition, that the power of attraction of human groups is generally proportionate to their mass.¹ Indeed, the larger towns have slightly lost their place, and the only fact that at all indicates this tendency operating at any time in India is that, during the decade 1901-1911, nearly the whole of the rise in the urban population of India took place in the group of towns of 100,000 inhabitants and over.

Thus an examination of the statistics of the urban population does not help us at all. It would indicate, if anything, an economic stagnation in India. We are, in this case, forced to resort to a somewhat general consideration of the different forces that have been acting on the growth of towns in India during the last forty years.

One of the most important factors determining the growth of towns in India at the present time is railway construction. This is a factor which affects the growth of towns in two ways. Firstly, the advent of the railway to a town means generally an increase in trade. If the town is already an important trade centre, the railway greatly enhances its importance. It also has the effect of creating new centres of trade in the tract through which it passes. But if a railway tends in this way to increase

¹ Weber, *op. cit.* chap. IX.

the town population, it has also an opposite effect. Often the exigencies of railway construction make it necessary that the old towns should be left aside from the main line. This, naturally, means a diversion of the old channels of trade, and spells the decay of the old towns.

Putting aside railways for the moment, the other factors towards an increase in town population are (i) new industries or further growth of old industries ; (ii) famines; (iii) creation of a landless labour class ; (iv) tendency of wealthy landlords and others to live in towns. Of all these different causes, the growth of industries has been, at any rate in all other countries, the most important one. But in India its influence has certainly not been as powerful. Indeed, there are very few towns in India at the present moment, which are creations of new industries. A conspicuous exception is Jamshedpur which has been created entirely by the activities of the Tata Iron and Steel Works. But in very few other cases has there been such a growth merely because of industries.

Famines, on the other hand, have been of much more frequent occurrence in India than the creation or growth of new industries ; and famines certainly add a great deal to the urban population. During famine time the rural population is out of work ; indeed, an Indian famine might be described as a time of national unemployment. As there is no work in the fields, the country population goes to the towns in search of it. In the olden times this movement towards towns in times of famines was very marked. It is said that in the great Rajputana famine of 1868, Agra, Delhi and the other adjoining towns almost doubled their population. But since the improvement of communications and the evolution of a good relief system, this movement towards towns has been greatly checked. Even thus we find that the two decades, i.e., 1872-81 and 1891-1901, in which the movement towards towns was most marked, were both decades in which there were widespread famines in India. But it must be pointed out that,

though famines may drive people towards towns, this movement cannot be more than temporary, unless there are occupations in these towns which can absorb this influx of population. In the absence of such occupations the crowds of people who have flocked into towns have to return to the country, as soon as they can find agricultural employment.

The same remarks apply to the creation of a class of landless labourers. The creation of such a class is one of the results of famines ; it also results from the steady movement towards the dispossession of old peasant proprietors, which has gone on in India now for nearly fifty years. The creation of a class of landless labourers helps or promotes urbanization only negatively. Such a class is not so bound up with the soil as the peasant proprietors and is, therefore, more ready to migrate to towns ; but here also it will be observed that they can only permanently migrate to towns, if they can find employment for themselves there. Indeed, for any movement of the populace there must be an active inducement and such inducement will be most powerful, if it comes in the shape of an increase in wage, or a rise in the general standard of living.

Lastly we may take into account the tendency of wealthy landlords and others to settle in towns. There is no doubt that, in modern times, as the attractions of urban life have become powerful, there is a distinct encouragement to absentee landlordism and thus to a partial increase in the population of towns. It will be apparent that, the numbers of the wealthy classes being very restricted, the numerical effects of this movement may be considered as entirely insignificant.

Thus on an examination of these causes, it will be found that the only important factors that effect a definite and permanent movement from the country to the town, are the increase of trade and the growth of industries.

On the other hand, there are a number of other influences acting to-day in India in the opposite direction. These may be enumerated as follows : (i) diversion of trade routes into different channels ; (ii) decay of old

handicrafts ; (iii) epidemics ; (iv) insanitary conditions and bad housing in towns. Diversion of trade routes is a consequence of railway expansion and other causes. It has been a very conspicuous factor in the decay of many old towns. As an illustration, we might take the case of Mirzapur. As pointed out above, this town, on account of its position on the Ganges, was an important trade mart. It reached the height of its prosperity when, in the Lancashire cotton famine of the sixties, all the cotton exports of North and Central India had to pass through Mirzapur down the Ganges. But soon after, the construction of railway lines along the Ganges deprived the river traffic of a great deal of its importance ; and Mirzapur began rapidly to decay. To take another example, Saugor, before the railway period, was an important trade centre, and the chief depot for the distribution of salt throughout the Narmada Valley and the Central India Agency ; but with a change in the trade route, Saugor rapidly decayed. Railways are not the only agencies responsible for the change of trade routes. There are the vagaries of the river courses to be taken into account. Myingyan, a flourishing town in Upper Burma, was entirely ruined because the Irawaddy changed its stream. Many old towns in Lower Bengal were thus ruined on account of the changes in the course of the Ganges. Such a diversion of trade happens in cases of local trading centres left aside by railways ; but it is not necessary that they be entirely left aside. Even an advantage of a few years in the building of the railway to another town, is enough to divert the old channels of trade. Thus Cawnpore gained a lead on Lucknow in the grain and hides trade of Oudh merely because the railway to Cawnpore was built before it was built to Lucknow.¹

The decay of handicrafts is an even more potent cause than the diversion of trade channels. As pointed out above, the industries of old Indian towns were in the main luxury or art industries ; and these depended for

¹ Hoey, *op. cit.*

their prosperity on the demand from the nobles and the courts. With the abolition of the courts the demand for the greater part vanished. Of course, the industries did not collapse at once ; they were old established handicrafts, and the Indian aristocracy for a time demanded many of these goods ; similarly there was an active European demand for artistic knick-knacks, which, though it debased the industry from the standpoint of art, still helped the craftsman to struggle on. But, with the influx of education and the creation of the Indian 'bourgeoisie,' the demand slowly died, and the handicrafts, threatened with cheap European competition, became increasingly unimportant. The craftsmen slowly gave up their old occupations, and had to resort to agriculture or any other occupations in which they found an opening. Such a decay of handicrafts and the consequent decrease of population was the fate of a great number of the old Indian towns. The process was naturally a slow one, but it was well marked ; and it was only in towns which could find alternative occupations and start new industries that the population did not suffer a loss. A very important case of such a recovery is afforded by Dacca. After the abolition of the court of the Nawabs, Dacca with its famous muslin industry and other handicrafts suffered a rapid decline ; this decline was continuous till 1870. But at about this time the cultivation of jute became popular in East Bengal and numerous jute presses were established round Dacca. With this added trade and industry Dacca regained its importance, and has been increasing steadily during the last fifty years. At Amritsar, the decay of the shawl industry was compensated for by the establishment of a flourishing carpet industry in the nineties. Unfortunately the carpet industry was not on a sound basis, and therefore Amritsar got another setback during the next decade. Contrasted with the case of Dacca is the case of Murshidabad—a city which in Clive's time was considered superior to London, but which, since the time of the annexation has been steadily declining ; or take Malda with its old silk industry, or Santipur, with

its muslin industry, whose products were inferior only to Dacca. These cases are cited only from Bengal, but like instances could be produced from any part of India. For the story is the same whether at Mandalay in Burma or at Paithan in the Deccan.

The diversion of trade routes and the decay of handicrafts are causes which are actively leading to a decline in the town population, but the epidemics and the insanitary housing conditions also act against the growth of towns. Epidemics, like famines in the opposite case, drive people away from the congested urban areas to the open country. It will be observed that the proportion of the urban population fell slightly during the first decade of this century, a phenomenon which is mainly to be attributed to the prevalence, in wide tracts of India, of an epidemic of plague. This was particularly virulent in the Deccan, the Central Provinces and Bihar. This epidemic killed large numbers of the urban population, and drove away larger numbers from the towns. But, the effect, like that of famines, is of a somewhat temporary nature. For the population tends to return to the towns as soon as the epidemic has passed away.

The insanitary conditions and bad housing accommodation affect the growth of towns somewhat differently. The movement, if there tends to be one, from the country to the town, is discouraged by these factors. The insanitary conditions of the Calcutta 'busties' and the Bombay 'chawls' are well known, and there is certainly no doubt that bad housing conditions tend to keep away a good deal of the potential labour supply from these towns. This is conclusively proved by the fact that among Calcutta jute mills the labour difficulty, of which complaints are made so generally, has never been felt by those mills which provide adequate and sanitary lines for their coolies.

There is yet another factor. In some parts of India in the old days the tendency to concentrate in walled towns was very marked. This was mostly because walled towns afforded better protection against the bands of

robbers which during certain periods were common in India. Such open robbery having become somewhat rare during the last hundred years, the walled towns no longer served any useful purpose ; and for people following an agricultural occupation it was inconvenient to stay in them. There was, therefore, during the seventies, a distinct tendency in many parts of India, notably the Central Provinces towards a disintegration of the population of these small towns.

So much for the simple process of the growth of towns ; we may now consider further the question of the growth of cities at the expense of the smaller towns. The statistics do not give any indication of a movement of this kind. But though this is the case there are many references in the different census reports, which show that the smaller towns are either stagnant or decadent and the bigger towns increasing. On the other hand, some census superintendents are of opinion that the smaller towns show the bigger increases. There are certain reasons which would lead one to believe that there should be a greater increase in the big cities than in the smaller towns. Firstly there is certainly at present a process going on in India of concentration of trade in the bigger centres. This is to be seen in the case of a centre like Delhi ; the trade has greater facilities and better markets here, and is thus attracted from the surrounding small towns. As opposed to this tendency of concentration there is also the one, in the railway days, of diffusion. The *Punjab Census Report* (1911) has the following : 'Almost every railway station is a centre for export. Grain, cotton, etc., are drawn to these stations from the adjoining tracts, and the agents of exporting firms arrange to buy the produce as it reaches there, thus obviating the necessity for the producer to go to the trading centres, in order to dispose of his surplus produce.' The effect of this is a decay in these local trading centres. Thus the decay of Ferozpur, during the last decade of the nineteenth century, was attributed to loss of trade owing to the produce of the villages, both far and near, which used formerly to be

brought to the city, being drawn away by the opening of petty agencies of European and Indian firms at most of the stations on the railway lines.¹ Both these processes, that of concentration of trade and also that of diffusion, hit the smaller towns and trading centres most. Again, the rise in the rate of wages in the smaller towns had not, during the last thirty years, kept ~~up~~ with the rise in prices as much as it had in the bigger industrial centres. This lagging behind of the wage rate sets up a movement of the artisan population from the smaller to the larger towns.

There is yet another factor, and that is the centralization of administration. Under the present system, all the population subsisting by administration of justice, revenue, etc., the legal profession, and others, have to congregate in the district head-quarters. In almost all other countries, this would mean a very insignificant proportion of the urban population; but, in a country like India, it is quite substantial. So, generally, the district head-quarters grows at the expense of the other centres in the district. For example the decrease in the population of both Ellichpur and Wasim in Berar was attributed to the head-quarters of the districts having been shifted to other towns. On a larger scale, a considerable part of the increase in the population of Dacca during 1901-11 was due to the creation of the new province of Eastern Bengal and Assam, of which Dacca was made the capital. There are, then, certain influences making for a larger increase in the bigger towns than in the smaller ones; but these seem to have been nullified by the effects of a slow decay in a large number of big towns.

A general consideration of these somewhat varied influences might be supplemented by an examination of the progress of a few typical cities in India. The examples here have been taken entirely from the class of big cities.

The increases in the two great cities of India, Calcutta

¹ *Punjab Census Report, 1901.*

and Bombay, have been considerable, but they have not been remarkable, nor have they been steady. Beginning from the top, the first remarkable increase that we come across in the class of big cities, is in Rangoon.

The population of Rangoon in 1872 was actually under one lakh ; in 1911 it had reached two lakhs, ninety-three thousand, an increase in forty years of one lakh and ninety-four thousand. Rangoon had not acquired much importance in 1872 ; it was only after the annexation of Upper Burma and the growth of the export trade in rice, that Rangoon as a port began to make rapid strides. Its progress has been continuous. Burma to-day exports more than three-fourths of the total rice exports of India and almost the whole of this export is through Rangoon. Latterly two industries, that of rice-milling and timber-sawing, have been started at Rangoon, but these industries are comparatively new, and employ only a small proportion of the labouring population. The other interesting feature about the population of Rangoon is that it is largely made up of immigrant coolie labour from India, and Rangoon depends for its growth on a continued supply of Indian labour.

A similar case to Rangoon is Karachi. Karachi stands in the same relation to the Indian wheat export trade as Rangoon to the Burma rice trade. The population of Karachi has more than doubled itself during the last forty years. This has been due entirely to the rise in the importance of Karachi as a port. It is noteworthy that Karachi possesses almost no industries of any importance. The growth of the population depends entirely on the trade carried on by the port.

The class illustrated by Rangoon and Karachi is perhaps the most important class of our big cities. It consists of ports, chiefly depending for their prosperity on their export trade. Within this class, even Calcutta and Bombay may be partly placed. But of course, ports in India are few in number. The next class to be considered will be that of the industrial cities. The best instance of this is Ahmedabad. Ahmedabad is an old city, famous for its handicrafts, and the skill of its

artisans. But its modern prosperity is due to the factory industry. It has increased its population by nearly a lakh during the last forty years. The trade of Ahmedabad, except in cotton and cotton goods, is not very considerable, and it is unique among Indian cities in the fact that more than half of its population is engaged in industry. The main industry is, of course, cotton spinning and weaving, for which Ahmedabad has peculiar facilities, but it is now attracting some new industries, notably tanning and leather work.

But it must be admitted that the case of Ahmedabad is an exceptional one. There is no other instance of such a purely industrial town among Indian cities. Otherwise Madura and Cawnpore may be taken as representatives of the industrial towns in India. Both began their periods of prosperity as important trading centres. Cawnpore soon became the seat of the growing leather industry, and subsequently the cotton industry and the woollen industry also came to be established there. The town had been increasing steadily, but was rather hard hit by the plague during the first decade of this century. But it is at present perhaps the most important manufacturing centre in North India. In spite of this, Cawnpore remains, in a large measure, a trading town.

Madura has a double history. Up to the beginning of the twentieth century it was very largely a trading centre in oil seeds, cotton and grain, its prosperity being largely due to the development of the Periyar irrigation scheme. But during the first decade of this century industries, especially hand-loom weaving and dyeing, have absorbed a very large share of the population of Madura.

Next comes the very large class of towns which are almost entirely dependent for their prosperity on trade. In these are included the great internal trade depots like Lahore and Delhi. But Delhi may be considered as having a considerable number engaged in industry. It is not so with Lahore, and many other Punjab towns, like Multan and Rawalpindi. Multan has grown in modern times mainly because of its favourable position on the trade route to Karachi, and the increase in

general export trade. There is nothing remarkable in this class of towns. They are all fairly big railway centres and large depots of grain, cotton, jute or oil seeds. From a very large number, a few typical ones are Bareilly and Meerut in the United Provinces, Narayanganj in East Bengal, Nagpur in the Central Provinces, and Hubli in the Bombay Presidency—all centres for the trade in raw agricultural produce.

On the other hand there is the not inconsiderable class of decaying towns. Patna, one of the oldest cities in India, is a rapidly decaying town. The decay is due to the loss both of its old handicrafts and of its river-borne trade, added to which is the dire calamity of plague. Lucknow, the beginnings of whose decay have already been described, is another example. These belong to the class of dynastic towns. Next come the sacred towns, and most of these have also fared badly. Gaya is declining rapidly. Allahabad is stationary in spite of its position as the capital of the United Provinces. Benares decreased in population by 19,000 from 1891 to 1911. Muttra also is rapidly losing its important position. It must not be imagined that the decline is due to any wave of the agnostic spirit in India; the pilgrims still flock in their usual numbers, especially as the improved communications have made pilgrimage much less risky and also cheaper. But the demand from the pilgrims for the products of the old industries of these towns has decreased considerably. Thus the main reason for the decline in the population of the towns which were seats of courts, and of the towns which were places of pilgrimage, is the same. It is the decline of the old handicrafts. This is shown by the condition of towns like Baroda, Indore, and many famous cities of Rajputana, which have steadily declined, in spite of the court being still in existence.

When, therefore, the statistics are considered, we find the effects of the two opposite tendencies almost evenly balanced. The rate of growth in the growing towns is just enough to keep up the percentage of the urban population, in spite of a large class of stagnating or

decaying towns. But this phenomenon of the decay of old towns is not peculiar to India. We see the same thing happening in England, when the industrial centre was shifted from the south to the north, and the old industrial towns like Norwich or Bristol lost their importance. But in England and most other countries, the growth of new industrial centres far outweighed the decay of the old ones.

The fact is, then, greatly emphasized by this, that in India the growth of industries has been taking place very slowly. Whatever little growth in towns there has been is due much more to the growth of commerce than of industry. The industrial city, with the exception of a few like Ahmedabad and Jamshedpur or a few jute towns on the Hooghly, is almost non-existent in India; and even in the mixed types, i.e. partly trading and partly manufacturing towns, the factor of trade far outweighs the factor of industry. Again there is a complete absence from India of any big town-aggregates or what Professor Geddes calls 'conurbations'. The only town aggregate at all resembling the big town groups in the Western countries is the group of jute towns on the Hooghly, taken together with Calcutta. There might also grow up such a group in the coal and iron belt in Bihar. In this connection it may be observed that in most countries the largest town aggregates have been round the coal and iron belts.

The development of modern industry in India has been, then, very slow. This is conclusively shown by the fact that the growth of modern trade and industry has only just been able to counterbalance the decay due to the decline of the handicrafts.

VARIATIONS IN URBAN POPULATION AT EACH CENSUS

Year of Census	1872	1881	1891	1901	1911
Total Population ...	206,162,360	253,896,330	287,314,617	294,361,056	315,156,396
Urban Population...	18,082,484	23,935,382	27,254,611	29,183,528	29,748,228
Urban Population Classification					
Towns of					
100,000 and over	4,321,917	5,295,997	6,170,480	6,634,749	7,075,782
50,000 to 100,000	1,856,297	2,411,470	2,710,259	2,930,565	3,010,281
20,000 to 50,000	3,338,490	4,470,995	5,098,770	5,473,989	5,555,820
10,000 to 20,000	3,634,373	4,842,072	5,410,063	5,975,180	6,163,954
5,000 to 10,000	3,587,372	5,029,457	5,762,985	5,963,471	5,944,503
Below 5,000 ...	1,344,035	1,886,291	2,101,054	2,175,574	2,007,888
Population added, at each census, owing to the enumeration of tracts omitted at previous census	33,139,081	5,713,902	2,672,077	1,793,365

CHAPTER XI

THE TRANSITION IN AGRICULTURE

THE division between different periods adopted in the previous chapters has been the division made by the seasonal calamities. Famines, indeed, play so important a part in the agricultural and industrial economy of India, that this division may on that account, be well justified. It has been remarked above that at the very beginning of the period under review, the character of the Indian famine was changing radically ; it is likewise to be observed that the importance of the famine during the whole of this period was slowly diminishing. Thus if we review famines from the 1861 famine in North-West Provinces and the 1869 Rajputana famine onwards, we shall see that already the effects were less felt in 1876-78, and that even the succession of two severe famines did not produce as much suffering and mortality at the end of the century as in 1876-78. To turn to a more recent period, the recovery from the 1907-08 famine was very quick ; and the effects of even so severe a failure of rainfall as that in 1918 were comparatively little felt. From these facts an obvious conclusion has often been drawn, that the agricultural classes to-day are more prosperous than they were, say seventy years ago. This, of course, does not necessarily follow. The effects of the famines have not been so severely felt largely on account of the better means of transporting food-grains from one part of the country to the other and the greater efficiency in the conduct of relief operations. Even if the prosperity of those classes of cultivators, who had more to sell than to buy, increased on account of the rise in prices, it is doubtful how far the large class of agriculturists, who owned only a small plot and had to supplement their earnings largely by extra work, had improved their position. The real wages

of agricultural labour are said to have increased since the beginning of this century,¹ but it is not clear how far they had been protected against bad seasons by this increase. It seems likely that it was not so much a material improvement in the condition of the agriculturist as the better means of transport that was responsible for lessening, in so large a measure, the effects of famines.

It was this same ease of communication that was bringing about another somewhat important change in Indian agriculture. This change might be called, for want of a better term, the commercialization of agriculture. The basis on which agriculture was conducted in India was being slowly changed. Broadly speaking the change might be described as a change from cultivation for home consumption to cultivation for the market. Every change in India during this period has taken place slowly and a large part of the cultivation in India is, even to-day, carried on almost entirely for home consumption; but almost everywhere, where specialized crops or even the superior kinds of cereals are grown, cultivation for the market is largely practised. In a self-sufficient village economy where payment in kind was the rule and most of the services were paid for at harvest time, it is natural that cultivation should be entirely for the production of food supply for the cultivator's family. The spread of transport facilities, when it began to break down the compact character of the village, affected also its agricultural economy. The change was seen in a gradual extension in the area of industrial crops under cultivation and a specialization in crops grown in different districts. The export trade increased and the internal trade also to a very great extent. The growth in the area irrigated also helped this movement. But it is not so much to the increase

¹ K. L. Datta, *Report of the Enquiry into the Rise of Prices in India*, vol. i, pp. 169-70 (1914). As against this see Keatinge (*Agricultural Progress*) who says that real wages are almost unchanged since the beginning of the 20th century (Chapter VIII).

in the area under industrial crops that we look for signs of this change, as to the changes in the methods of marketing the crop. The proportion of industrial crops grown to-day has increased only to the extent required by the foreign demand. For the internal demand for these was almost as large, proportionately, in 1850. It is the basis of cultivation rather than the proportion under different crops that has changed. The cultivator to-day does not try to grow every kind of agricultural produce that he might require at home, as he had to do when the means of communication were deficient. He is more ready now to resort to the market for his requirements and also for the disposal of his surplus produce. This market for agricultural produce of all kinds might, indeed, be said to have been non-existent before the middle of the last century. The first impetus towards this tendency of commercialization was noticed when money economy was introduced into the village in the shape of cash assessments; but the effect of this could not go far until communications were improved. Then slowly rents in kind went out of fashion and cash rentals were introduced. The effect of this, combined with the assessments, was to compel the cultivator to sell a part of his produce immediately after harvest; and as, generally, the interest of the money-lender became due also at about the same time, the part of the produce that he disposed of at this time was a large part of his total crop. In most cases the cultivator had to buy later on in the year, from his money-lender, part of the crop he had sold to him at harvest-time (i.e. in those cases where this crop was a food-crop). Thus the ease of communications which made the exportation of agricultural produce out of the village possible, together with the introduction of money economy, brought about this movement towards a commercialization of Indian agriculture. Even when the cultivator grew largely for home consumption his produce came on the market just after the harvest, because of these peculiar circumstances. The commercialization of agriculture had progressed most in those tracts where the crops were

largely grown for export out of the country. This was so in the Burma rice area, the Punjab wheat area, the jute area of Eastern Bengal and the Khandesh and Berar cotton tracts. Through the operations of the exporters an efficient market organization for moving the crops quickly to the ports had come into existence. In the Berar cotton tracts there are very many centres at which, just after harvest, large purchases are made on behalf of the exporters and the various mill companies. Here the cotton is generally brought to the markets by the cultivators themselves and does not go through the hands of a very large number of middlemen. In the Burma rice trade, on the other hand, Mr. Noel-Paton describes the market organization thus: 'In most cases paddy is taken over on the threshing floor by local traders, or small brokers or middlemen acting on behalf of the millers or speculators. The small local trader, known as the jungle broker, gets advances from traders or others at the railway station and goes round to the threshing-floors buying at less than the railway station rate given him by his principal.'¹ Nearly all this rice was removed to Rangoon for being milled. In the cotton and jute tracts these market centres also attracted the steam presses; while in the Punjab and also in U. P., where the raw agricultural products had not to be worked up further before being exported, almost every railway station became a centre of export and attracted local traders and agents of exporters. The writer of the *Hyderabad Census Report* (1911) says with reference to the enormous expansion of the area under cotton in Marathwara, 'when a country begins to produce the raw materials of manufacture in place of food crops, it has started on the road to industrialization.' This statement cannot apply to India, as a whole. For here there was no large displacement of food crops. In some tracts, certainly, the food crops were largely ousted by the industrial crops, but in others they gained in favour. There was to some extent a re-distribution of the

¹ F. Noel-Paton, *Burma Rice* (1912).

proportions of different crops grown in various parts of the country and particular crops were now more largely grown in those tracts to which they were most suited. The result of this process was not necessarily industrialization ; indeed, it is doubtful how far such industrialization has taken place in India. But commercialization of agriculture undoubtedly did follow. A very large portion of the total crop now came into the market instead of being retained at home. Naturally, the movement was most marked in crops in which there was either a large internal or external trade, but even when, as in the case of the millet crops, the internal trade was not important, a large proportion still came into the market as a result of certain circumstances.

These circumstances were the payment of Government assessments and the interest of the money-lender. For paying these two dues the cultivators had to rush into the markets just after harvest, and to sell a large part of their produce, at whatever price it fetched. Most of the poorer cultivators had to buy back after about six months part of the crop they had sold away at harvest time. The prices at harvest time were very low, but in six months' time they had risen to heights which were absolutely ruinous to the cultivator who now came into the market.¹ Indeed Mr. Noel-Paton remarks that, for example, the Burmese money-lender's profits depended very largely on the certainty of this six-monthly rise in prices. The cultivator who now came into the market sank deeper and deeper in debt and a few years of this process were enough to ruin him entirely.

This curse of indebtedness was one of the greatest handicaps to Indian agriculture. In a previous chapter a few causes of this indebtedness have been discussed. The nucleus of the peasant's debt was generally inherited ; the force constantly acting towards augmenting this was the variations in the seasons. It was not only in the Deccan that the granting of rights of absolute proprietorship and the right of alienation of land to the peasant

¹ F. Noel Paton, *Burma Rice* ; also *Indian Wheat*, etc.

had resulted in a large increase in the peasant's debt. The same causes had produced an almost identical result in the Punjab.¹ Mr. O'Dwyer in a paper before the Royal Society of Arts, shows the effects of the peasant being given absolute rights over his land.² By comparing the conditions in certain Rajputana States with those in British territory, he points out that in these States the cultivator was much less indebted on account of his not possessing absolute right over his land. Soon after the report of the Deccan Riots Committee, this had been found to be the case almost all over India, and at the close of the 19th century legislation was being brought into force in many parts of India restricting the right of the cultivator to alienate his lands in many ways. The Deccan Agriculturists' Relief Act was extended with certain modifications to many other districts of the Bombay Presidency. The Deccan Act did not directly lay restrictions on the transference of land; but the new legislation, such as the Central Provinces Act (1898) about the alienation of homesteads or the Punjab Land Alienation Act (1900), did lay such restrictions. The Punjab Land Alienation Act made a difference between the transfer of land to a member of an agricultural tribe and transfer to a person who did not belong to an agricultural tribe; the latter kind being forbidden. The immediate effect of any Act of this kind was a contraction of credit. For example, one of the first effects of the Deccan Agriculturists' Relief Act was that the money-lending business suffered and the smaller 'sowcars' were impoverished.³ This also meant that the cultivator did not get credit as freely as he did before the Act was passed. The Act in the Punjab and other places laying restrictions on the transfers of land had the same effect. These latter kinds of legislation had also the desired result of preventing transfers of land in large numbers.

¹ S. S. Thorburn, *Musalmans and Money-lenders* (1888).

² O'Dwyer, 'Agrarian Conditions,' etc. *Journal of the Royal Society of Arts* (1899).

³ *Papers Relating to the Deccan Agriculturists' Relief Act*

The Punjab act has, indeed, been called the Magna Charta of the agriculturist. The relevant question here is whether these Acts checked the growth of indebtedness. This they do not seem to have done in any large measure. Where there was direct restriction on alienation of land by the peasant the acts had the effect of lessening the number of such alienations. The various provisions giving discretionary powers to the magistrates to enter into the history of the debt checked the fraudulent practices of the money-lenders. We are also told that the money-lenders now required good security or a direct mortgage of the land, before they advanced substantial sums to the cultivators. Nevertheless, the legislation did not and could not prevent the growth of the indebtedness of the peasantry. It modified some of the worst features in the operations of agricultural credit in India, but with a very small holding and widely fluctuating seasons the peasant's necessity for credit remained as powerful as before. It was not, however, only during the adverse seasons that his debt increased. A period of prosperity also generally saw an increase in these debt-charges. The period of prosperity during the cotton boom combined with facile credit had made the Deccan cultivator hopelessly indebted.¹ The same effects of prosperity were witnessed in the Punjab, since the beginning of this century.² In many places prosperity and indebtedness also went hand in hand with demoralizing habits. A period of prosperity has this effect because it makes credit easy to obtain. For prosperity means also a steady increase in rentals and land-values; a land-owning cultivator finds his credit vastly expanded and he does not hesitate to draw upon it freely. The ruinous effect of this process was realised by him only when a period of adversity came in. Against these effects of a facile credit and prosperity, a mere negative contraction of credit in certain directions

¹ See above, chap. II.

² M. C. Darling, 'Prosperity and Debt in the Punjab.' *Indian Journal of Economics*. Jan. 1921.

was not very effective. As a matter of fact, in a few cases such restriction made the ultimate effects of credit on the peasant even more onerous than they were before. What was wanted and what alone could really cure the evil, was a positive modification of the terms on which credit was obtained and a salutary check on the purposes for which the cultivator sought credit. No amount of legislation could bring about this result and the only remedy that has been found successful, as yet, is the spread of a co-operative credit system and the diffusion among the cultivators of the co-operative spirit.

It is impossible to determine the extent of the dispossessio[n] of old peasants by the money-lenders. The only guides here are the statistics of mortgages and the decrees of courts ; as guides these are imperfect and the statistics compiled are in themselves very incomplete. The general reports seem to indicate that until the end of the last century the process was constantly on the increase. The growth of population was an important factor. In the earlier part of the 19th century, when land was plentiful and labour scarce, the money-lender had no inducement to take over the possession of land. By 1860 this was no longer the case and land-values began steadily to appreciate. So at about this date may also be put the beginning of the process of the transference of land from the peasant into the hands of the money-lender.

The Government took steps at the beginning of the present century to check the rapidity of this process in those parts where the effects were most marked, e. g. Central Provinces, Punjab, Bundelkhand, etc. The dispossessio[n] of these old proprietors still continues, though its rate has been checked by legislation. The effects of this process are certainly bad in India. In most parts of the country the money-lender is not an agriculturist, and even where the land passes into the hands of an agriculturist the mere transference does not, generally, make any difference to the system of cultivation. The cultivation, in most cases, is still

carried on by the old cultivator, now paying a high rental instead of the old interest on his debt. The only difference effected by such a transfer is that the position of the actual cultivator of land becomes more precarious than before, and whatever incentive he might have possessed for cultivating well, is entirely lost. For this process does not mean in India, as it did in most other countries, a consolidation and an enlargement of the unit of cultivation; it merely shows a somewhat altered distribution of the profits of cultivation. Even where there were large compact fields under single-ownership they were generally divided into small plots, and let out to a number of petty cultivators. If, then, the real unit of cultivation (which in India differs widely from the average area owned by individual landowners) is to remain a small holding, it must be admitted that a cultivation carried on by peasant proprietors is vastly preferable to one carried on by cultivating tenants. What made it worse was that in large parts of the country long-term leases were not liked by the land-owners, and here a larger and larger proportion of tenants were being made merely tenants-at-will.¹ In the absence of a class of enterprising land-owners cultivating highly on a large scale, a movement which thus converted peasant proprietors into cultivating tenants was to be deplored. The large class of landless labourers in India was being recruited from the class of tenants-at-will.

It has been said that the increase of indebtedness was due largely to the very small size of the holding. This leads us to the question, now very prominent in India, of the sub-division and fragmentation of land. It has been said over and over again that the size of the average holding in India to-day is uneconomic. The economic holding has been defined by the Baroda Committee as a holding which could be adequately cultivated by the joint labour of an ordinary cultivating family. It is easy to

¹ N. G. Gangoly, *The Grievances of the Tenantry or Agra.* (1915).

pick holes in this definition. But, as long as this unit of the family is, more or less, *the* unit of labour available to each cultivator for the cultivation of his plot, the definition seems to be reasonable. Unfortunately the average holding in many parts of India could not profitably employ all the labour of the cultivator's family. The result naturally expected is that a part of this labour would be drawn to other pursuits and thus supplement the earnings of the family. This is so in India wherever such alternative occupations are easily to be found;¹ but in many parts of the country there is no alternative occupation except agricultural labour. The wages of this kind of agricultural labour are—except at harvest time²—so extremely low that the addition thus made to the family earnings was very small. The result is that all the labour of the family is spent on the small holding; and yet the total profits from this cultivation are hardly sufficient to support the cultivator and his family. There was another bad feature of this holding; it was not only small but it was scattered. A holding of, say, five acres would be held in numerous strips scattered in all parts of the village.³ This also contributed to uneconomic cultivation in another way; for, on account of this fragmentation, all the capital available to the cultivator could not be used in the most profitable way.

The Hindu law of inheritance, which provides for an equal division of the property of the father among all his sons, has been held responsible for this unfortunate movement of sub-division and fragmentation. It will be seen that the movement towards sub-division is really the most harmful. For, even when a consolidation of scattered

¹ Dr. H. H. Mann, *Land and Labour in a Deccan Village* (No. 1). A large part of the labour of Pimpla Soudagar (the village described) was attracted by workshops, etc., at Kirkee which happened to be near.

² But at harvest the cultivator himself would require all the labour of his family.

³ For the extent of this sub-division and fragmentation see the two surveys by Dr. Mann: also G. Keatinge, *Agricultural Progress in W. India*, Appendix I; and H. S. Jevons, *Consolidation or Agricultural Holdings in U. P.*

holdings takes place in the village at any particular time, if the process of sub-division is operating continuously, the evils of fragmentation will re-appear after a certain period. This has been generally recognized and most of the legislation recommended for remedying these evils aims at the prevention of this process of sub-division. Even though it may be admitted that the Hindu law of inheritance has contributed largely towards this evil, the main cause must be sought somewhere else. It may be noticed that in prescribing an equal division of the property among all sons the Hindu law is not peculiar. Somewhat similar laws hold good in certain Continental countries to-day. Here also there is an almost similar division of the land among sons provided for; but it has not been found in these countries that the sub-division has been carried to the same extent as in India. Take the case of Belgium. This is well-known to be a country of small holdings. Here excessive sub-division has been prevented by the practice of holding the property jointly amongst the sons instead of dividing it; while one of them farms it and pays rent for it to the rest. 'But for this practice,' says Mr. Rowntree, 'the sub-division of property might soon become excessive and unprofitable.'¹ That no such practice is current in India cannot be explained merely by the conservatism or obstinacy of the Indian peasant. As pointed out above, the peasant is quite willing to supplement his earnings by extra work when he can find it. But when no such alternative occupation is available he cannot be blamed if he does not choose to become an entirely landless labourer and insists on his share of the parental holding. Indeed, this is the really important point. But then we are confronted with the cry from many tracts of a scarcity of agricultural labour. Now in the first place, this scarcity is complained of only at harvest time. This is partly due to the fact that the extra labour of the small cultivator and his family, which is largely available at

¹ R. Seebohm Rowntree, *Land and Labour. Lessons from Belgium.* Chap. IV, p. 47.

other times, is not available at the harvest. Mr. Keatinge puts forward three other reasons for this scarcity. First the increase in the area under cultivation. Secondly the growth of city industries.¹ Whether the second reason did really count very much, if we consider India as a whole, must be doubted. In some tracts the supply of labour was affected by the stream of emigration. This was so especially in certain parts of the Madras Presidency, from which a considerable supply of labour went to Ceylon and the Straits Settlements. Here social causes played quite an important part in inducing the labourer to emigrate. There is a third reason which Mr. Keatinge suggests and which is very important. This is, that the substantial farmer now-a-days has given up the practice of working in the fields with his family, and works the fields entirely by hired labour, as soon as he can afford it. If this statement held good of the whole of India and if such a movement was widespread, then this alone would account for a very great deal of the scarcity of agricultural labour. However, the existence of a scarcity of agricultural labour at harvest would not disprove the contention that there were more people working on the land than the land could properly support.

Briefly, three important changes have been pointed out as taking place in the agriculture of India. It cannot be too often emphasized that all these tendencies were operating very slowly; and again that it is impossible to ascertain the extent of their progress. These changes were, firstly, a commercialization of agriculture—by itself quite a beneficial movement. For it brought about a slightly better distribution of the crops and increased the profits of cultivation; this was merely the result of the enormously better means of transport. The other two tendencies (i.e. the dispossession of the old proprietors and the excessive sub-division of land) were, however, affecting the ordinary cultivator adversely. The growth of population was an important

¹ Keatinge, *Agricultural Progress, etc.* chap. VIII.

factor in both these, and the absence of a large industrial growth was also largely responsible. The large numbers retained on the land affected adversely agricultural improvement. Farming on a large scale would not be undertaken where high rentals ruled and the competition for small plots was very keen. For, as Mr. Rowntree rightly points out,¹ in countries where there is a large sub-division of land, its rents and prices are higher than elsewhere. So it was more profitable for the landowner to let out land in small plots than to carry on cultivation on a large scale. How in another way it retarded the progress of improvements will be readily appreciated when we consider that the introduction of machinery in agriculture has been in most countries due to the dearness of agricultural labour.

¹ Rowntree, *op. cit.* chap IV.

CHAPTER XII

THE COUNTRY ARTISAN

IN the old economic structure of India, the position of the country artisan was definitely fixed. The urban handicrafts, though greatly advanced in industrial organization, were numerically unimportant. Thus in old India, the country artisan was numerically by far the most important industrial worker. With the passage of years, this dominant position of the artisan has been lost ; but even to-day, the large bulk of the industrial population of India is formed of country artisans. If the decay in numbers has not been considerable, the loss of status and the old fixed position seems, on the other hand, to have been great, and the rural artisan population to-day is in a fluid state.

All artisans in the village, however, as pointed out in chapter I, have not such a fixed position. There was one class of artisans who were village servants and another independent class. The following quotation brings out the difference in status of the two groups very clearly :—

‘ In villages there is a very wide distinction between the village menial and the independent artisan. The carpenter, the blacksmith, the potter, the scavenger—in villages where women are secluded, the washerman—all classes in fact whose services are required in husbandry or daily domestic life—are paid not by the job but by customary dues consisting of a fixed share of the produce of the fields ; and the service they are bound to perform is measured by kind, not by quantity. . . . Those artisans, however, whose services are only occasionally required, such as the weaver, the oilman and the dyer, are paid by the job ; not usually indeed by cash, but either in grain or by being allowed to retain a fixed share of the raw material which their employers

provide for them to work upon.¹ This brings out clearly the difference in status between the two groups of artisans. But this difference in status in the village community did not necessarily mean a difference in economic position. The difference between the two groups lay not so much in their economic condition, as in the mode of payment and the times of payment for their services. There was an obvious advantage to the former group, in that their income was a fixed and a steady one, but it is doubtful how far this was a real advantage. It is true that, in case of a failure of the harvest, the village weaver or dyer would get no orders and would have to starve; but the case of the menial classes was not much better, for the failure of a harvest would very considerably reduce their share of the produce. In fact, the distinction between the two groups was made merely for the sake of convenience, and the prosperity of all the village artisans depended intimately on the prosperity of the cultivators. The fortunes of the whole village depended on the one important fact—the nature of the agricultural season.

While all the artisans were not included in the village servant group, the village servant group itself was not composed only of artisans. There was also a combination of occupations in some cases, so that it was difficult to say who was a pure artisan. Take the 'Mahar' of the Maratha country. His position was that of the village watchman; as such, he had perhaps a small plot of land, but he mostly lived on the village dues, and was one of the first recruits to the landless labour class. He had apparently no characteristics of an artisan; yet over large tracts the 'Mahar' was also a weaver of coarse cloth. The potter was a true artisan, but because in many parts of the country his craft necessitated his keeping a donkey, he also became the general carrier for the village; the leather worker, again, was often found to be partly a day labourer. In spite of these difficulties three distinct groups can be

¹ *Report of the Census of Punjab, 1881*, p. 307.

made in the village population outside the agriculturists pure and simple. The highest stratum among them, socially and economically, was composed of the priest and the accountant ; next came the artisan group, comprising chiefly the blacksmith, the carpenter, the oilman, the weaver, the potter and the shoemaker. Lastly came the village servants, such as the watchmen, the scavengers, etc., who formed the unskilled labour class—their small plots of land, wherever they possessed them, being insufficient for their needs. They were mostly labourers, though they occasionally combined this with occupations like coarse weaving, basket-making or mat-weaving.

The changes which have come over this structure during this period of more than half a century do not appear to have been enormous. Most of the old artisans to-day are paid dues ;¹ the payments for the jobs to-day are still mostly in kind. The village to-day possesses the same equipment of artisans as before. The change then, whatever its nature or extent, has not been revolutionary. But the direction of the change is definite. The tendency has not been towards the abolition of the dues and services outright ; but the customary dues are playing, now, a much less important part in the income of the artisan than they used to. The same holds good as regards the plot of land that the hereditary artisan held. Its importance, too, has diminished. Again the artisan has become to-day more ready to migrate. All these are signs of a dissolution of the bonds, which once held the community close together. The slow decay in importance of the 'Punchayet'—the assembly of village elders—had prepared the ground a good deal for the loosening of these bonds ; but, with easy communications and the possibility of getting outside the village things, which before this time had to be got

¹ 'The carpenter, the blacksmith, the washerman, the barber, the potter, etc., still exist as village servants with recognized duties and remuneration.' *Report of Census of Central Provinces* (1911). By J. T. Marten.

in the village itself, the necessity of keeping all the artisans in the village was less felt. This did not mean that their services were at once dispensed with; but it materially helped the movement towards payment of the artisans for a job done rather than for a yearly service. The share of the harvest slowly sank in importance, and payment by jobs began largely to take its place. The transition is not complete yet. The ease of communications also contributed to the process of at least a partial movement towards concentration of certain artisans in the larger villages and towns. For now that a commodity, for whose supply the villager could afford to wait for the weekly market, could be brought to the village from outside, the presence of the artisan himself was not required on the spot. The two factors, then, that governed this movement towards a partial concentration of artisans were (1) urgency of the peasant's requirements, (2) facility of carriage. On both these counts, the presence of the blacksmith and the carpenter was required in the village. Either of them might be required to repair an agricultural implement at any moment. The potter's wares again could not be brought from a distance, as they were extremely fragile. The leather-worker's presence was especially necessary in those parts in which well-irrigation and leather-buckets were common. Of all these artisans, the weaver was least required from this point of view. The demand for cloth could be put off for the time being, and the weaver's products could also be easily carried from a distant market. Thus we find the weaver the first among the class of artisans who showed any signs of concentration in bigger centres. The dyer was in the same boat; in fact it was not uncommon for the weaver to be a dyer also. The goldsmith is another case in point. Except in tracts where they were also the village money-lenders, this tendency towards concentration is specially marked in the case of goldsmiths.¹

¹ *The Punjab Census Report* for 1901 mentions that on account of the uncertainty in the value of precious metals, which is

Apart from this tendency towards concentration of artisans as a result of easier communications, there were two others which were bringing about a change in the above class of artisans. Both these were manifest in all those cases, where the industry was in a depressed condition on account of foreign competition or other reasons. The tendencies were for the artisan, driven out of his occupation, to join the ranks of the day-labourer, or to migrate to towns in search of employment. The extent of this migration to towns was, however, very limited. The ranks of day-labourers were most naturally recruited from the lowest strata of village menials, but very many of the artisan classes were also driven into them. Lastly, there were also many artisans, who, as soon as they had slightly improved their position, gave up their hereditary occupations and took to agriculture. This was partly the result of certain social forces working in the community. These were the directions which the artisans who were thrown out of their occupations took. As regards those who kept their hereditary occupation, there was little change in their position. Their organization, or rather the lack of it, and their methods of working, were yet unchanged; and if in places their dues had dwindled, they were still paid by the job, in kind, and their income remained almost stationary. Only those, who began to be concentrated in the bigger villages, improved the organization of their industry during the process. The organization and the economic position of the village industry were then, during this period, very little changed. The variations in the fortunes of individual groups were, on the other hand, sometimes violent. It is, therefore, necessary to examine the condition of a few prominent classes of artisans separately.

The blacksmith and the carpenter may be considered first. There was a great similarity between these two groups of artisans, and in many parts of India their

unfavourable to the goldsmith in the smaller villages, there is a tendency for the wealthier goldsmiths to migrate to towns situated on railway lines.

occupations were interchangeable. They were both essential for agricultural purposes; for their chief work was the preparation and repair of agricultural implements. The work of the village blacksmith had always been reported to be crude, and one of the difficulties in the introduction of improved implements had been his inability to repair them. The only articles, other than agricultural implements, that he made were certain articles of domestic use and the tools for other artisans. The position of the village blacksmith was not much affected by any outside factors. He had never produced a great deal of original work and had chiefly confined himself to repairs, for which the demand was pretty steady. On the other hand the demand for the village blacksmith was not an increasing one either; whereas in the towns industries requiring the services of a blacksmith were increasing. For example, there was the development of cutlery trades in North India, and the growth of engineering workshops and iron foundries almost all over India.¹ It is not clear whether there was any movement of the village blacksmith to the towns to satisfy this demand, but in any case it could not have been considerable. Whenever he did go to the towns, he definitely improved his position. The blacksmith may be said to have been more or less in a stationary condition throughout the period, except the urban blacksmith, who improved his position. Naturally, however, with other village artisans, he was beginning to work more and more for the job. It must at the same time be pointed out that the demand for his services was not increasing, and any increase in the number of village blacksmiths would have to be met by the flow of a certain proportion to other occupations.

The carpenter held a similar position in the village community. But he did less repair and more original work than the blacksmith. Here his position became worse. The introduction of the iron cane-crushing

¹ *Monographs on Iron and Steel Industries in Bengal, U. P. and Punjab.*

press, for example, undermined very greatly his position in the sugarcane-growing tracts. The same may be said of the introduction of the iron plough; but as this movement was not very general, the effects cannot have been widely felt. Wherever, indeed, improved machinery was coming into use in agricultural operations, the position of the carpenter was becoming less secure. Thus the *Bengal Census Report* for 1901 puts the carpenters among the class of rapidly decaying village artisans. If the village carpenter migrated to the towns, his chances were quite good. The general activity in the building trades, in coach and carriage making and in the small furniture industries in the towns was creating quite a brisk demand for carpenters.¹ External competition with the carpenter was not direct, but rather indirect. Thus while in certain tracts he was rapidly losing ground, in others his position was stationary. But in the towns both the blacksmiths and the carpenters had a good chance of improving their position. It must be remembered in both these cases that the extent of the town industry was strictly limited.

The potter was perhaps the poorest of the artisan group. The wares he made were the cheapest of all the products of village industry. His working capital was very small. The potter's was a decaying class of village artisans, and everywhere the numbers in the industry were decreasing.² The external forces making for a decline in this industry, were the competition with the potter's wares of the products of the Indian brass and copperware industry and the imported cheap enamelled ware. There was a small pottery factory industry in India but its products were greatly superior and did not compete with the village potter. The competition of the brass and copperware industry affected the potter in his better class of customers. The substantial cultivator

¹ A. C. Chatterjee: *Notes on Industries in the United Provinces* (1908), chap. III.

² Bombay, *Monograph on Pottery and Glasswork*. C. E. Low, *Report on the Industrial Survey of the Central Provinces and Berar* (1910), chap. IV. Also Chatterjee, *op cit.* chap. XIV.

was rapidly giving up the use of earthen vessels for domestic use, and taking to brass and copper wares instead. It is doubtful, however, how far the enamelled iron ware had entered the villages. Yet the demand of the poorer classes remained steady. For the potter, there was no alternative of migration to the towns, as there was for the carpenter or the blacksmith, and a potter thrown out of his hereditary occupation had to take to ordinary agricultural labour.

The village tanner was perhaps the hardest hit of all the village artisans. His position began rapidly to deteriorate since the extraordinary rise in the world prices of raw hides and skins. The fact that in many parts the hides of dead cattle were his perquisite did not help him much. Wherever he had to buy his raw materials in the village, his position was the worst. For here the agent of the exporter or of the city tanneries in India, e.g. from Cawnpore, Bombay or Ahmedabad, was easily able to outbid him. The case of the tanner showed most clearly that the bonds of custom were not strong enough to withstand the economic forces. As long as the hides had not acquired a substantial value, the people gave them away as perquisites. In Central Provinces the people violently disputed this right to dead cattle. On this Mr. Marten remarks: 'that the communal system is gradually giving way before the growth of individualism, is shown by the change in the view of the cultivators towards the question of the hides of dead animals which used to be the perquisite of the "Mahar" and "Chamar" communities.'¹ There was a similar instance in Madras Presidency. 'Here the Madigas (tanners) are attached to one or two families of ryots and are entitled to the dead animals of the houses.' But 'of late years there is a tendency observable among the Madigas to poach on each other's monopoly and among the ryots themselves to dispense with the services of the family Madigas and to resort to the open market for their necessities. In such cases the ryots demand

¹ *Report of Census of the Central Provinces, 1911.*

payment from the Madigas for the skin of their dead animals.¹ These instances show that the bond of custom was only slight. The dues were paid and the services rendered so long as they were not irksome or expensive. This great increase in the prices of raw hides and skins reduced the country tanner to a very bad condition, and large numbers of this community were driven to agricultural labour, while a few were absorbed by the urban tanning industry. The decline of the village tanner was perhaps the most remarkable of all.

The oilman was not a village servant; but he was to be found throughout India. As in almost all the village industries, the cultivator gave the oilman the raw materials, in this case the oil-seeds, and had the oil crushed by him. The two most important uses of oil in India were (1) as an illuminant, (2) for culinary purposes. The importation and the increasing use of mineral oil, therefore, made the position of the oilman very precarious. The use of kerosene for lighting purposes spread rapidly all over India, and thus took away from the oilman a very important part of his business. This decay may be said to have begun about 1880. The export of oil-seeds from India and the growth of an oil-pressing industry in the towns did not, however, greatly affect the position of the oilman. For the oil-seeds were supplied to him by each individual cultivator; and the urban industry was as yet very small in its extent, and had not even captured the urban markets completely; it could not have any effect, therefore, on the village oilman. The decrease in the number of oilmen due to the introduction of kerosene must, however, have been considerable.

The country dyer was to be found in all villages of a fair size. Dyeing according to the old Indian method involved very complicated processes, and the dyer had to possess a considerable degree of skill. The competition of foreign goods was, in this case, an important factor. Aniline dyes were introduced into India about

¹ Chatterton : Monograph, *Leather and Tanning*, Madras.

1870. They were at first of a very fleeting quality and greatly inferior to the Indian dyes. But they had two important advantages. They were cheap and they were very easy to use. Their spread in India was therefore rapid, and by 1890 Indian dyes had almost completely gone out of use. The facility with which these dyes could be used had the effect of diminishing the demand for dyers. For some people began to use the dyes themselves. But the real harm done to the dyer class in India by these imports was that they made the dyer's intimate knowledge of the processes of using the vegetable dyes worthless, and lowered the importance of the industry. Mr. Fawcett says: 'the truth is that the introduction of cheap aniline and alizarine dyes into India has had the effect of throwing open the industry to all who care to take it up, as dyeing does not now require the special study and knowledge which was necessary when the native ingredients were used.'¹ This made the competition in the industry very keen and cut the profits very low; and the industry, ever since the introduction of foreign dyes, declined rapidly. The production in mills of dyed yarn had also an adverse effect on the industry, as the weaver often bought the dyed yarn direct instead of getting the cloth dyed. The decay of the industry was further hastened by the fact that most of the dyers did not get the best even out of the aniline dyes they used. A small movement to organize the industry in factories was started in Madura and other places; but except in Madura it did not meet with much success.

The dyeing industry and its prosperity are very closely connected with the cotton hand-loom weaving industry. The hand-loom industry is the biggest and the most widely spread in India. It is not surprising, therefore, to find that it has received a great deal of attention of late years. At the same time cotton weaving is a good deal more localized than most other country industries. There are colonies of weavers in most

¹ Monograph: *Dyes and Dyeing*. Bombay.

towns and big villages of India. Nevertheless there are usually weavers to be found in most villages also. There is at present a difference of opinion as to whether the industry is a decaying one or not. There seems to be every reason to think that for many years after 1850 it did decay fairly rapidly, the decline being specially marked in the industry connected with the production of the finer kinds of goods. Dr. Watson's remarks in connection with the commercial importance of the different products of the Indian loom are interesting. He says 'there are certain fabrics which will probably be best and most cheaply manufactured by hand . . . the native looms will continue to yield the embroideries, the shawls, the carpets for which they are already so famous.' But even more interesting are his remarks about the coarse cloths. 'The thicker materials are more durable as well as warm; of their commercial importance as a class evidence is afforded by the fact that during the recent cotton famine in England and consequent rise in price of raw material the native goods retained their position more firmly than the English ones did, though the price of the former rose to a much greater extent than did the price of the European.'¹ Thus there were two classes of goods, the embroidered and other finer goods, in which the hand-loom had a peculiar advantage, and the coarser kinds, which ideally supplied the demands of the common cultivators, where the cotton hand-loom industry of India held its own. Between these two was the large class of less fine goods and medium count goods in which the competition of the mill industry, whether Indian or foreign, was able to beat the hand-loom industry decisively. That is the whole history of the competition, but it cannot definitely be said during what period the industry decayed and when this process was stopped. Again the periods differed from one part of the country to another, for though Bengal was affected by foreign competition in the earlier part of the 19th century, the Central

¹ Watson, *Textile Manufactures, etc., of India*, 1867.

Provinces industry was not touched till after the sixties. But it seems that though the periods might differ, a stage had been reached in the history of hand-loom industry in all parts of India, at one time or another, when the mill industry had captured as great a portion of the market between the two limits as it could. At this point a sort of equilibrium was attained, and after this the decay of the hand-loom industry, if any, has been very slow. We will proceed to illustrate this proposition. There have been two attempts made in Madras Presidency to measure statistically the variation in the hand-loom industry.¹ The Census Commissioner in 1891 came to the conclusion that there were no definite grounds for believing that the numbers in the industry were declining; while in 1911 Mr. Chatterton definitely reached the conclusion that there had been no decrease in the number of weavers in the Presidency during the last 40 years, i.e., 1871-1911. As regards Bombay Mr. Enthoven writes in 1895: 'Probably the number of persons relying for their livelihood solely on weaving had decreased considerably of late years,' but adds later on, 'in the case of hand-looms the effects of foreign competition have already been fully experienced,' and concludes, 'there is no reason to hold that the industry will undergo any further considerable reductions.'² The same conclusion is more emphatically stated by Mr. Mehta. 'It may be safe to assume that, if the hand-loom industry has not increased, it certainly cannot have decreased of late years.'³ Mr. Silberrad writing about the U. P. industry in 1898, said that the industry had certainly declined, but that during the last ten or twelve years the rate of decrease

¹ *Reports on the Census of Madras Presidency, 1891 and 1911.* For a statistical examination of the whole question see Appendix I to the *Report of the Industrial Commission*. They come to the conclusion that since the beginning of this century there has been some decline in the number of coarse weavers, while the number of weavers producing the finer goods has, on the other hand, increased.

² Enthoven: *Monograph: Cotton Fabrics*. Bombay, 1895.

³ P. N. Mehta, *Report on the Hand Loom Industry*, 1909.

had considerably lessened.¹ In Bengal there were found to be clear indications of a decline, though here also a few of the very fine manufacturers and the coarse cloth industry were holding their own.² While by another estimate 'there was a continuous decline till about 1904, since when a new impetus had been given to the industry,'³ a conclusion which is confirmed by an estimate for Eastern Bengal.⁴ For Punjab in the latest survey, that by Mr. Latifi, no attempt is made to estimate the rate of progress or decay,⁵ while Mr. Francis in 1884 thought that 'notwithstanding the competition of Manchester the Punjabi weaver's trade is rather extending than diminishing.'⁶ About the industry in the same province in 1901 the census report says, 'the general opinion is that the manufacture of country cloth in the villages has not been seriously affected.' Only from the Central Provinces is a continuous and all-round decay reported.⁷ As was to be expected, the evidence is certainly not uniform, but on the whole it lends support to the theory that at a certain stage a point of equilibrium was reached in the competition between the two industries. The evidence also indicates that, over large parts of the country, this point was reached towards the end of the last century.⁸

Though the decline in the number of weavers in the later period was not considerable, it must have been very large when the competition started. The position of the weavers also had perhaps worsened a little,

¹ Silberrad. N. W. Provinces: Monograph, *Cotton Fabrics*.

² Bannerjee. Monograph: Bengal, *Cotton Fabrics*, 1898.

³ J. G. Cumming, *Review of the Industrial Position and Prospects of Bengal*, 1908.

⁴ G. N. Gupta, *Industries and Resources of E. Bengal and Assam* (1908).

⁵ A. Latifi, *Industrial Punjab*, 1911.

⁶ Francis. Monograph: *Cotton Fabrics*, Punjab.

⁷ C. E. Low, *op. cit.*

⁸ The extent of the industry can be gauged from the fact that in Sir V. Thackersay's opinion the industry consumed double the quantity of yarn consumed in the Indian mill industry. *Vide* Paper read before the First Indian Industrial Conference, 1905; also Graham-Clarke, *op. cit.*

though this was not possible in any large degree, because their position was already extremely bad at the beginning of the nineteenth century. The real decrease in the industry must have taken place in the country ; the urban weaver, or the weaver wherever he was to be found in fairly considerable numbers, was, on the commercial side at least, fairly well organized. Also he had no other occupation, and was very tenacious of his craft, though it might not pay him at all. The country weaver was also partly a labourer or an agriculturist. It was, therefore, this class of weaver that was declining in numbers. Together with the tendency of the hand-loom weaver towards a further concentration was also noticed this tendency of the rural weaver towards either completely giving up weaving or taking it up completely.¹

The village industry, then, was not in a flourishing state. The only two important classes of artisans, who were tolerably well-off and were not greatly affected by foreign competition, were the blacksmiths and the carpenters.² This was so, largely because the existence of these artisans in every village was peculiarly necessary in the existing condition of the methods of cultivation. Most of the other groups of artisans were in a bad condition and their numbers decaying. In the matter of alternative occupation, also, it was only the blacksmith and the carpenter class, who had a fair chance in the towns of earning a living in their particular occupation. For other artisans, driven out of their occupations, unskilled general labour was the only alternative.

Any definite account of the status of the artisans in the village is hard to obtain. The system generally is a

¹ The cotton spinning rural industry was almost extinct by the end of the nineteenth century. Very rarely it was still followed by the aged women of the weaver's household ; but mostly wherever it remained it was to be found in the towns. Its existence and also its terribly sweated condition here, were both the result of certain social forces. For it was one of the very few industries that the 'Parda Nashin' or the secluded women could respectfully follow. See Hoey, *op. cit.* ; also A. C. Chatterjee *op. cit.*

² G. N. Gupta, *op. cit.*

great deal too loose now. With the gradual disappearance of grain rents, dues at the harvest time must also have a tendency to diminish or to disappear altogether. It is not easy to say in what parts the custom has completely died out and when. An account of its gradual disappearance is not available. The fact is noted only when the custom has wholly disappeared. Thus we read about the 'Dhers' of Bombay Presidency : 'In villages they keep in order the water bag or "mot". For this they were formerly paid at harvest time; but the custom now seems to have died out.'¹ In the 1881 census reports the village community is shown everywhere as almost intact, but even here, forces making towards a loosening of bonds are noticed.² In many parts the system was quite sound even in 1911; but cases like that of the tanner show that it was liable to break down at any moment. At the same time, there was no upheaval, and the process of change was extremely slow. For example, even where the share of the harvest disappeared, the perquisite given at the annual festivals, at marriage ceremonies, etc., remained. The point to be emphasized is that almost everywhere the tendency was for the regular income of the artisan from the dues and the perquisites, etc., to diminish steadily in importance. This made him more ready to take to other occupations. This point being reached, the other tendencies have been sketched above. The only one that needs further comment is the tendency of those artisans, who were in a position to do so, to take wholly to agriculture. The reasons for this are obvious. The profits of most village industries were extremely small, and the best chance of the artisan to improve his position lay in the practice of agriculture. For the village industries were far from steadily improving their position. Again agriculture was considered to be a much more respectable occupation socially than any of the artisan industries.

¹ Martin : Monograph, Bombay ; *Leather*, etc. 1903.

² See specially Mr. Baine's note on the village community in the *Bombay Census Report*, 1881.

The growth in the numbers of those for whom there was no longer any place in their hereditary industry was shown by the increasing diversity between the caste and occupation statistics. These statistics generally indicate that artisans were giving up their occupations for agriculture or ordinary labour. But certain factors, such as the fact that the caste occupation was by many returned as their actual occupation, even though they might be following it no longer, or that sometimes in an artisan industry people outside its particular caste were also to be found working, make these statistics unreliable for a comparison between the different country industries.

Lastly may be considered the effect of famines on the artisans. Materially, the artisans were on much the same level as the ordinary labourer; some of them, indeed, the weaver for example, were much below this level. Thus the village artisan, together with the lower village menials and the agricultural day labourer, was the first to seek relief in famine times. Of all classes the weaver came the earliest.¹ He also suffered most on account of this compulsory abandonment of his occupation. For on the relief work all were employed on rough manual work. The carpenters, the blacksmiths, the masons might sometimes get employment in their own trade, but for others there was no such hope. The weavers, unused entirely to manual work, suffered most. Many of them lost their skill during this period and it was hard for them to take to their occupation again. The effect is described thus by the Famine Commissioners (1896). 'In the absence of extraneous aid, many weavers are obliged under the stress of the famine to fall off from their own trade; and of these a considerable number never return to it, but sink into and swell the ranks of ordinary labourers.'² A similar effect was to

¹ Minutes of Evidence. *Famine Commission, 1880.* Evidence on classes of rural and urban population first affected.

² *Report of the Famine Commission, 1896*, chap. VI, sec. iv. Some successful experiments were carried out in some parts especially in 1899-1900 at relieving weavers through their own trade. For details and results of the experiment conducted by

be seen on the other artisans also, though not in such a marked degree as on the weavers.

The village industry was a decaying industry. Large numbers of those thrown out took to ordinary labour, while a fortunate few were absorbed in industry in the towns ; some also took to agriculture, while for the rest, i.e. those who still retained their hereditary occupations, they remained what they always were, a poverty-stricken class, abnormally sensitive to the variations of the seasons.

the Nagpur municipality, see *Famine Commission* (1901): Minutes of Evidence : evidence of Rao Bahadurs Bhargo Rao and Bapu Rao Dada.

CHAPTER XIII

THE ORGANIZATION OF URBAN INDUSTRY

Of the different forms of industry in India the only one that reflected the impact of new outside forces by a continuous change in its organization, was the indigenous urban handicraft. The plantation and the factory were forms which had been introduced, in an already highly developed form, from outside India. Of the indigenous industries the village industry had merely decayed under the pressure of the new forces. Its organization still remained primitive. It was that of an artisan working, in most cases, on raw materials supplied to him by his customer and being paid in cash or kind for his services. It was what Bucher termed wage work.¹ The only important change that took place in the organization of village industry was in the way the payments were made for the services of the artisan. In all other respects—in the lack of capital of the artisan, or in the semi-agricultural position of the artisans—it showed no change.

The urban industry, on the other hand, in all those crafts in which it still flourished, showed a distinct change in its organization. Thus it is the only form of industry in which the effects of these new forces can be studied. All the crafts, indeed, declined in artistic importance throughout this period; but many, for which the old demand still remained—e.g. gold and silver work, cotton and silk fabrics, brass and copper ware, etc.—or for which a new demand was found—e.g. the carpet industry—still retained some of their commercial importance. Another well-marked tendency was the abandonment of the highest class of products and the production

¹ C. Bucher, *Industrial Evolution*, trans. by S. M. Wickett, chap. IV.

of the cheaper kinds of wares. This was specially noticeable in crafts like wood-carving, ivory-carving, artistic working in metals, etc. This was a natural result of a change in the character of the demand. These artistic industries which once depended on the demand of the courts were now dependent on a more popular demand.

The chief feature that distinguished the urban industry from the village industry was the presence of a capitalist.¹ Even when the industry was composed of independent artisans they needed credit in one form or another. This credit, in the first instance, was provided by the dealer in the raw materials of the industry. Thus in the initial stages of industrial organization the dealer in ornamental wood or ivory supplied the raw materials to the worker; but he had nothing to do with the disposal of the finished product. The next stage was when the dealer in the raw materials also bought from the craftsman the finished goods and put them on the market; the next, when the dealer gave out the raw materials and paid a piece-work wage to the artisan for working them up. The last stage was reached when the workers were brought together under one roof—whether called a workshop or a small factory—by the capitalist. All these various forms are to be found in the urban industry of India to-day. Sometimes all of them are found existing in the same industry.

The hand-loom weaving industry, being the most important and widespread of all Indian handicrafts, is perhaps the best in which to observe the various changes. The earliest stage is that of the independent weaver working generally in ordinary coarse cloth, and disposing of the wares locally. He has almost no capital and

¹ Pure 'wage-work' was also to be found in the towns. For example, when a person wanted carving or other wood-work done in his house, he merely employed a wood carver paying him a piece-work wage. This system was most prevalent in ornament making. Here the raw materials were almost invariably provided by the customer and the goldsmith was paid a piece-work wage. Of late years, however, the practice of buying ready-made ornaments has been spreading slowly.

can only buy small amounts of yarn from the local dealer. Every time he has to work it up and he must be able to sell his finished product before he can buy another instalment of yarn. In some places he buys the yarn outright¹ but in others he buys it on credit. This is the first introduction of the middleman, in most cases the yarn dealer. The yarn dealer charges interest on this credit but has nothing to do with the disposal of the finished product. These stages of organization are found generally in the small centres of industry and only in the coarse cloth trade. The reason for the independent weaver restricting himself to the coarser products is obvious. If the weaver has to dispose of his products himself the market must be a fairly steady one and also must be near the weaver. The weaver in the village centres generally resorted to the country market or fair where he could easily dispose of his products; sometimes even here the necessity of an intermediary between the buyer and the seller was felt and Bannerji mentions that in some country fairs, brokers were to be found who brought the weaver and his customer together.² Generally speaking, however, the weaver and the customer could come together only in such weekly markets and fairs. The independent weaver had only a small quantity to sell at each time and it was necessary for him that he should sell it at once. The demand for the finer fabrics was largely a seasonal one in India, and therefore the independent weaver had no secure place in this branch of the industry. In the larger centres, again, where the trade in cloth was well organized, there was little chance of the weaver meeting the customer directly. Therefore, the independent weaver was not to be found in large numbers here.

The position of the independent weaver was very

¹ P. N. Mehta. *Report on Hand-loom Weaving*, etc. Also Chatterjee *op. cit.* 'The Nagina weaver does not take an advance of yarn from the dealer but purchases it outright, keeping a running account with him.' chap. I.

² Bengal : Monograph : *Cotton Fabrics*.

precarious. Mr. Mehta estimates that only about 25 per cent of the total number of weavers belonged to this class. For a failure to sell his products for any considerable time was bound to drive him into debt. When he once became indebted he could no longer wait to sell his cloth directly to the customer but sold it to a middleman who would give him a return immediately. Sometimes the yarn dealer and the cloth merchant were two different persons¹ but in most cases they were the same. Indeed the yarn dealer was almost compelled, in many cases, to become also a dealer in cloth.² For the weaver was generally indebted to him, and in case of failure to sell his products, the only thing that the weaver could offer him in satisfaction of the debt was the cloth itself. The cloth was the yarn dealer's only security and so he generally combined dealing in yarn with dealing in cloth. This system, in which the weavers bought yarn on credit and then sold the cloth back to the yarn dealer, must be clearly distinguished from the system in which the weaver worked for the dealer for a piece-work wage. In numbers of cases, where the yarn dealer and the cloth dealer was the same person, the dealer, instead of charging interest on the credit of yarn, stipulated beforehand that the weaver should sell him the finished goods at a certain price. In the ordinary hand-loom industry, weavers in this condition formed a large proportion of the total. They were, of course, very badly off; for the margin of profit taken at both ends by the dealer was very large and left them little more than a bare subsistence wage. But they were, at least, partially independent. When the weaver became very heavily indebted to the dealer even this independence was lost. He had to pledge his loom to his creditor and work for him on piece-work wages. Thus in most centres there would be a few prominent dealers for whom nearly half of the total population of

¹ Low, *op. cit.* chap. III.

² 'Economic Conditions of the Weavers of Bankura,' by A. R. Brown. *Bengal Economic Journal*, January 1917.

weavers would be working for wages. When the weaver had, in this manner, lost his independence he had no chance of regaining it. Thus in most centres of the industry, the two kinds of weavers—the independent artisan and the artisan working for wages for a capitalist—existed side by side. But in certain branches of the industry the independent artisan had disappeared altogether. This was the case where the market for the products was far removed from the centre of the industry and where the raw materials were rather costly. In such cases, the 'house industry' or the 'commission industry' was fully developed. A typical case of this kind was the Coimbatore industry in the finer textiles. The market for the goods of this industry was in the Maratha country, which was at a great distance from Coimbatore itself. The trade was concentrated in the hands of a small number of traders. The weaver, generally, got a fixed amount of yarn or silk and gold-thread (the industry was in bordered cloth) from the trader and received his wages on turning them into finished articles. The weavers in this industry were always attached to one of the traders. The weavers, of course, worked in their own houses on their own looms.¹ Thus in an industry with a specialized demand the weavers worked entirely to the order of the middleman. Some weavers were so reduced in circumstances that they had even lost their looms. These were called the 'cooly weavers.' They worked in the houses of the richer class of independent weavers who happened to possess more looms than would employ the members of their family. On an average there was only one loom in each weaver's house, but the small class of rich weavers possessed sometimes as many as five or six looms. They then employed these 'cooly weavers' to work these extra looms. It is to be noticed that in the Coimbatore industry even the weavers possessing five or six looms worked only to the orders of the traders. In

¹ Evidence of Mr. N. G. Chatteyar. Minutes of Evidence, *Industrial Commission* (1916-18). Vol. III.

many places the weavers possessing a large number of looms and employing cooly labour on them, also financed other weavers to a certain extent.

The entirely independent artisan weaver was only to be found in the village or the small town industry. Mr. Mehta remarks, 'All weavers working on the artisan system are more or less connected with the soil.'¹ The semi-independent artisan also was only found in the coarse-cloth industry of the large towns. But the domestic system came in as soon as the weaving of finer goods was introduced. The independent weaver was too poor to buy silk, gold thread or the other costly raw materials. Even in the smaller centres or in villages, where finer goods were produced, the weaver generally worked to the order of the local money-lender. The cooly weaver, on the other hand, was found in most places, and was very prominent in the larger centres.

In many branches of the hand-loom cotton industry, the introduction of a factory system was not possible. For wherever the demand is uncertain the domestic industry has one great advantage for the capitalist over the factory system ; it is that he can stop orders in a slack time without any great loss to himself. In other cases, where the demand is fairly stable, the introduction of a factory system in the hand-loom industry has been tried but has failed. The reasons usually given for this failure are the difficulty of persuading the weaver to attend the factory regularly and the loss of the labour of the weaver's family when he leaves his home for the factory.² The second reason is certainly an important one. But the main reason seems to be this ; that the economies effected by a factory organization of the hand-loom industry are not large enough to make it profitable to the capitalist to pay a substantially higher wage than what the weaver already earns on the domestic system. For any economies to be gained by an improvement in

¹ Mehta, *op. cit.*

² Evidence of Rao Bahadur P. Theagaraya Chetty before the Industrial Commission. *Minutes of Evidence*, vol. III.

the hand-loom, such as the introduction of the fly-shuttle, could as well be introduced while the weaver is working at home. The economies, then, could not be very large and therefore the extra wage necessary to induce the weaver to leave his home and to keep him regularly at work in a factory, could not be offered by the capitalist. The commission or domestic system, therefore, was gaining ground and was the predominant form of organization in the industry.

The organization of the silk-weaving industry was, as was to be expected, similar to that of the better class of cotton goods. The raw material being very costly the weaver was working entirely for the dealer. The Madras monograph describing the organization at Berhampur says, 'Most of the weavers, especially in the case of the more valuable cloth, work for merchants, on the piece-work system.'¹ The Bombay monograph records the growth of the process by which the weaver became more and more dependent on the dealer. Here also the now dominant type is the same. 'The merchant advances small sums of money, provides the silk and buys the fabric from the weaver at a large profit to himself.'²

The brass and copper ware industry was one which was never very widely spread in rural India. It had always been primarily an urban industry; but since the beginning of this period it had begun to concentrate in big towns to an even greater degree than before. The different forms of organization found in this industry were the independent artisan, the master-worker with one or two assistants, and the workshop. The two former were predominant in the smaller towns. The industry was a flourishing one and the demand for its products was very large. Differentiation and specialization of operations were proceeding at a rapid rate and machinery was being slowly introduced. All this resulted in a movement towards the concentration of the industry.

¹ Thurston (1899).

² Edwardes (1900). Monograph : Bombay : *Silk Fabrics*.

in a few big towns, and the workshop was becoming the typical form of organization. In many of the larger towns workshops employing as many as twenty or more persons were to be found.¹ This industry provides a sharp contrast to cotton hand-loom weaving. The hand-loom was worked essentially by one man and the different operations could not be split up. In the brass and copper ware industry, on the other hand, the processes were very varied and the work was split into a number of different operations, for each of which a specialized workman could profitably be introduced. The introduction of small machinery for certain simple operations was also possible. Therefore, an organization which could bring a set of specialized workers together and which, on account of a larger unit, allowed the use of machinery in simple processes, effected a great saving and was bound to spread.

The wire and tinsel industry (or rather the gold and silver thread industry) offered an even more marked case of specialization of the different operations. Here it was necessary that the raw material should pass through the hands of a number of different sets of workers, before being turned into a finished product. The independent artisan had, therefore, no place in the industry ; 'at every stage it is the dealer who gives out the material and receives back the product.'² The classes of dealers differed; in U.P. they were generally the embroidery merchants, from whom the demand chiefly came. The production by machines was said to be very much inferior to production by hand. But the competition of cheap imported German articles had been rapidly undermining the position of the industry since the beginning of this century ; and for its own protection the industry had to adopt machinery and turn out cheap articles. This, however, was not everywhere. The only widely spread use of machinery was

¹ Dampier: Monograph: *Brass and Copperware: N. W. Provinces*, 1899.

² Nissim: Monograph: *Wire and Tinsel: Bombay* (1909).

to be found in Bombay and the Gujarat towns, and it was here only that the industry was able to hold its own against foreign competition. As soon as machinery was introduced the organization, of course, conformed to the factory type.

The carpet industry was the only urban handicraft which had a considerable foreign market. In fact, most of the woollen pile carpets made in India were for export. This was entirely a cheap carpet industry. The only two important centres of the industry were Mirzapore and Amritsar. The organization at these two centres differed somewhat. At Mirzapore the industry was scattered in the villages round the town, and in the town itself there were very few carpet-weavers. The exporting firms entirely controlled the trade but they did not deal directly with the actual weavers. They dealt with the owners of the looms, who engaged their own weavers and other workers. The firms gave advances to the loom-owners and these in turn gave advances to the weavers. The weaver in most cases was heavily in debt to the loom-owner and the loom-owner, taking advantage of this, did not supply the weaver with regular work. For it was evidently to the advantage of the owner to have a large number of weavers attached to himself in case of increased demand. Here, again, the organization was the commission or the domestic system.¹ At Amritsar, on the other hand, the industry was centred in the town itself. The exporting firms, who were also the producers, controlled it. Mr. Latimer says that this was entirely a factory industry; but the organization is not quite a factory organization. For, within the factory, the work was given out to master-weavers who employed their own workmen. The master-weaver generally made a handsome profit, but sometimes his contract with the firm might turn out unprofitable for him. Thus he was in no sense a wage-worker like the foreman in a factory, but actually bore a good part of the risks of production.

¹ Kunwar Jagdish Prasad, *Carpet Weaving* : U. P. (1907).

We have seen that all the stages of industrial organization existed side by side, in the industry evolved out of the urban handicrafts of India. The main changes that had occurred during this period were the widening of markets for all industries and the introduction of outside competition. The widening of the markets had everywhere the effect of a greater localization of industries and also a greater specialization within them. We have seen in a former chapter that the villager, as yet, consumed very few products of outside industries, and thus all these tendencies were most marked in the somewhat higher kinds of industries. The increase in the production of the finer class of cotton goods and a greater specialization in the different towns—especially in the Madras Presidency—was a result of the forces which had converted the whole of India into one market for the finer textiles. The natural consequence of a wider demand for the products of the industry was the divorce of the direct connection between the actual producer and the consumer. Such a divorce made the middleman's presence inevitable. The artisan's lack of capital, together with this factor, brought about the loss of his independence by the artisan. Foreign competition, wherever it was not too overwhelming, generally had the effect of compelling the capitalist to give up antiquated methods and introduce new ones. Almost everywhere, it further depressed the artisan and strengthened the hands of the middleman.

Where little capital was required and the consumer was near at hand, the artisan system still survived. Where the raw materials were costly or the consumer far removed or the demand a seasonal or an uncertain one, the worker's subjection to the middleman was almost inevitable. The potter, as long as he turned out cheap earthenware, was independent and almost never in debt; but as soon as he turned brick-maker he became indebted; soon after, the transition was complete and he was turning out bricks for the middleman trader.¹

¹ Low, *op. cit.* chap. IV.

The workshop or the small factory came in last. The process was very slow, but under the stress of foreign competition and the introduction of machinery, this form of organization became sometimes necessary. The wire and tinsel industry is a case in point. But factory organization could not come in, unless the demand was fairly stable and unless this made the introduction of labour-saving appliances possible, or effected, in other ways, large economies in the cost of production.

The working conditions and the wages to be obtained in the domestic industry were far from satisfactory.¹ In this whole group the worker was badly paid and had also little chance of improving his condition. With the advent of factory organization he was taken away from home, and whatever independence in his methods of work he might have possessed, was lost; but, on the other hand, his wage increased and his material condition decidedly improved. There is no comparison made here between the independent artisan and the factory worker. Unfortunately, the field in which the independent artisan still existed was very restricted and he was fast disappearing from the urban industry of India.

It is easy to see that there are no novel features in this evolution of industrial organization. The same features have always been noticed in a similar transitional stage in other countries. This merely emphasizes the belief that there is nothing to warrant the contention, frequently made, that the Indian economic structure is the only one of its kind and outside the pale of ordinary economic laws.

¹ The industries, such as *Phulkari*, *Kasida* and other embroidery industries, in which women of respectable but indigent families were at work, were terribly sweated. The profits, especially in the embroidery work, were considerable, but the peculiar conditions obtaining made it possible for the dealer to lower the wage to an absolute minimum.

CHAPTER XIV

CONCLUSION

WE have now reviewed the recent economic history of India. This history seems to fall naturally into three different periods. These periods do not differ greatly from each other in their characteristics ; the forces which first came to the forefront during the decade 1860-70 were prominent throughout all these years. Their results were slowly worked out ; and even to-day it is these forces—the results of a contact with the economic structure of the West—that are shaping events in India. The division into three periods is made not on account of the differences of economic characteristics, but because they serve to bring out broadly the cycles of prosperity and adversity.

There will be observed a certain amount of rhythm in these periods. We find a period of prosperity from about 1860 to 1875, when a terrible famine arrested it. The progress began again after about five years of adversity and from 1880 to 1895 there was another fairly prosperous period. Then intervened two famines even more terrible than the previous one ; but by 1900 the country had recovered somewhat, and the next fourteen years or so, until the outbreak of the War, were mildly prosperous. This is a rhythm which might be compared to the analogous movements of trade cycles. India, being a predominantly agricultural country, these movements are denoted by alternate periods of good seasons and famine years, rather than by years of trade booms and trade depressions. This is not the place to enter into the highly speculative discussion on the relation of sun-spots to the nature of the rainfall, nor are we concerned here with the connection between trade cycles and the nature of harvests. We merely point out that, even to-day, agriculture is so overwhelmingly important in India that the periods of prosperity of the

country as a whole depend almost entirely on the nature of the agricultural seasons.

This threefold division has another advantage also. It helps to mark three stages in the industrial progress of India. From 1860 to 1875 was a period which witnessed the beginnings of the factories and the plantations, but in 1875 the progress achieved was insignificant. In the same period began a rapid decline of the handicrafts in India; this latter movement continued throughout the next period till the late nineties. Real progress in the factory industries only began after about 1875, and during the next twenty years the two textile industries prospered. It was, however, only after the late nineties that industrial progress all over the country began; and in the first decade of the twentieth century many mineral industries and some small miscellaneous industries came into prominence. It was also during these latter years that there was a spread in India of the use of small machines and small engines, and generally a tendency to make a greatly increased use of mechanical appliances everywhere. There was one feature, however, which was noticeable throughout all these years. Old established Indian industry, generally, was non-progressive, and a further progress in the application of science to methods of production in the West was always liable to bring about a rapid decline in the old-established industries of India. The process was specially marked in the handicraft industry, but it could also be observed in the decline of the sugar or the tanning industries. The factory industries established in very recent times were the only ones that were at all progressive.

What was the industrial position of India in 1914? The question has been frequently asked, and many conflicting answers have been given. When we attempt an answer, one thing must always be remembered. We have to take into account not only the new growth but also the decline of the old industrial forms. A quantitative statement is impossible. A rough outline would be: that the village industry as a whole was decadent, and in the towns the majority of the old handicraft industries

had declined, while in some of the more important crafts, if there was no increase, neither was there a considerable decline ; of the modern industries, the plantations, the textiles and the coal mines employed a large number of persons, and in the later years there was a considerable growth of small miscellaneous industries. But a statement in this form does not help us at all.

Two indexes have often been used to measure a country's industrial progress : (i) the proportion of manufactured goods in the import and export trades ; (ii) the growth of towns. In the case of India the first test is not entirely satisfactory. For the proportion of the foreign trade to the internal trade is not very large ; and again the most important (numerically) industries of India, such as hand-loom weaving, do not figure at all in these returns. Mr. Justice Ranade was the first to apply this test to Indian conditions ; he came to the conclusion that the position of industries had sunk lowest in India about the middle of the seventies, and from that time till the early nineties the position had been steadily improving. This is substantially corroborated by the other factors that we have considered. Prof. Kale, who applied the methods of Ranade at a later date, merely came to the conclusion that there had been an almost uninterrupted progress since the nineties. Thus by an application of this test we arrive at this result ; that the industrial position steadily worsened from about the middle of the century to the seventies (a fact already amply proved above) and that since the seventies there has been, on the whole, a steady progress. The examination of the nature and character of the growth of towns did not prove much more ; it merely indicated very strongly that, when the decline of the old Indian industries is considered, the total industrial progress made by India during this period was very small. The returns of the industrial census pointed to the same result.

Not only is the total industrial progress small, but also the position of agriculture as the first industry of India is as strong as ever ; and in the total growth of

population in India the agriculturist still maintains his position. This growth of population again is a periodical phenomenon generally dependent on the nature of the seasons. The figures¹ of the increase are :—

1872-81	...	3	millions.
1881-91	...	20	"
1891-1901	...	41	"
1901-1911	...	19	"

The influence of the famines on the growth of population is thus very clear ; and there is no doubt that, but for this recurring calamity, the increase in population would have been much greater. Even as it is, this growing population has meant an increasing pressure on land in India.² The decaying village industry is steadily throwing more and more people on to the land, and only a fixed percentage of this growth has been absorbed by the towns. The result is evident. More and more lands on the margin are coming under cultivation and the sub-division of land has in very many parts of India increased to an alarming extent. This problem of finding an outlet for the growing population is the most important of all in India to-day. The excess of persons on the land hampers the progress of agriculture itself, and the question of the uneconomic holding is not likely to be solved, unless the growth of industries takes away a large proportion of the agricultural population to the towns.

So far we are on sure ground. The whole survey emphasizes all these points: the very slow growth of new industries and the partial decay of old ones ; the increasing pressure of the population on the land ; the very small progress made in agricultural improvement—especially in the introduction of labour-saving appliances. The considerable change that has come about, is neither in agriculture nor in industry, but in trade. The methods of trading have been revolutionized, and the volume of both

¹ Corrected figures for the first two decades from a paper by Sir C. A. Eliot on the Indian Census Report (*Journal of the Royal Society of Arts*, 1904).

² For a careful study of the problem see P. K. Wattal, *The Population Problem in India*.

internal and external trade has increased enormously. The markets are now both wider and better organized. But the progress of industry has not gone hand in hand with this commercial revolution. The lines which the small progress that has been achieved has taken are not, indeed, peculiar. They follow in almost every respect the lines of the industrial evolution in most other countries. The only thing, then, remarkable about this industrial evolution of India has been its slowness.

Thus far, the ground is sure. But then, the very slowness of the progress points to certain deficiencies in the industrial equipment of India; and when an enquiry as to the nature of these deficiencies is made, a survey of the economic history does not help us greatly. The attempt, however, may be made and a few points briefly indicated.

Consider the question of capital first; India is well-known to be a very poor country and her accumulations of capital are but small. There was a special reason for this. Agriculture, India's chief industry, was conducted all over the country on the basis of small peasant proprietors or cultivating tenants. Thus the distribution of property was much more even in India than most other countries. Now, it is an accepted fact that an equitable distribution of the country's resources does not help the growth of large stocks of capital in the country. Sleeman, deplored the sub-division of land in the country, remarked as long ago as 1844 that this prevented the accumulation and concentration of capital so necessary to the industrial development of the country.¹ Sub-division since that time has gone further instead of being checked. It must, however, be pointed out that in some parts of the country, especially Bengal, there were large landowners possessing considerable capital resources. It is noteworthy in this connection that the only part of India where industry has been to any considerable extent developed by Indian resources

¹ Sleeman, *Rambles and Recollections*. Edit. Smith, vol. II, chap. XVII.

is Gujarat ; and here, there existed from very ancient times an enterprising class of traders carrying on commerce with foreign countries. Again, in most parts of the country, the capital resources were in the hands of the substantial agriculturists, who could always find profitable employment for their money by sinking it, if they so desired, in their land or, what was more likely, by lending it to the needy peasant.

Apart from this agricultural capital which was not available for industrial development, there was in the country a class of traders who, considering the difficulties of commerce in olden times, had brought commercial finance to a high degree of organization. For this trading capital of the country, industry competed with commerce. But what these traders wanted was a quick return. Since the improvement in the means of transport, the moving of crops and also the trade in imports—especially cotton piece-goods—had become very profitable ; it also gave a quick turn-over. In the manufacturing industry, on the other hand, the period of waiting for the profits was very long, and the returns were not so certain as those in commerce. Whenever the capital was invested in an industrial undertaking, the venture was such as would give a reasonably quick return. Once the profitableness of cotton-ginning or rice-milling was proved beyond doubt, capital rushed into these industries, and soon in many tracts there were more of these small factories than were necessary to deal adequately with the raw material produced. The resources of capital were small and a large part of these was wanted for agriculture ; the remainder, which might have been utilized for industrial purposes, was rendered unavailable by the entirely unorganized condition of industrial finance.

Organized banking in India, outside the few important trade centres, was almost unknown, and even the few banks that did exist did not find it profitable to devote their attention to financing industry. This was the unfortunate result of the same causes that had made the railways in India look more to export trade than to

internal trade. The Presidency Banks had from the beginning chiefly financed the movement of crops from the rural tracts to the ports. The accommodation was only wanted here at harvest time; but during this particular season the demand for money was very strong, and the rate for it rose very high. The banks had, therefore, always adopted the policy of keeping as great a portion of their resources as possible free for harvest time. This meant that they could not lend to any industrial concern for a very long period. These factors had always militated against any help forthcoming from the banks to the industries. The smallness of India's capital resources, the competition for these from both agriculture and industry, the high profits to be obtained in money-lending and in commerce, and the particularly high rates that ruled for money accommodation at harvest time, all these combined to prevent a large flow of Indian capital into industry.

As far as wages go, labour in India is decidedly cheap. The standard of living among the lower classes is very low and their requirements few. In skilled handicrafts—especially where the occupation is hereditary—the labour is also extraordinarily efficient. It is his skill and his low standard of living that assist the weaver in his competition with machine-made goods. It has also been amply proved that, when properly trained and taken proper care of, the Indian labourer is quite as efficient as any other labourer. On the other hand, there is very little doubt that, taking the conditions as they are to-day, Indian labour is decidedly inefficient, even considering the low wages it earns.

The main reasons for this seem to be two: (i) the illiteracy of the labourer; (ii) the conditions obtaining in Indian industry. Sir B. D. Mehta, of the Nagpur Empress Mills, than whom few people are better authorized to speak on Indian labour, always insists on want of education as the chief handicap to Indian labour. This entire lack of education makes the labourer unable to grasp the simplest of mechanical operations; his labour, therefore, becomes very inefficient as soon as he

is set to work on a complicated machine. The same want of education is partly responsible for the lack of any desire on the part of the workman for a rise in his standard of living. Unless such a desire is present, a mere rise in wages does not increase efficiency, but only encourages the labourer to take a somewhat longer holiday than usual. The excessive hours of work have themselves partly caused this want of education, but primarily it is due to the entire neglect by the Government of this, its most important duty. The want of sanitation in the big cities—and generally throughout India—and the entire disregard, in many industrial establishments, of all hygienic laws, have also contributed largely to the low efficiency of the Indian worker.¹ The effect of excessive hours has already been indicated. With a low and stunted physique, a mind entirely untouched by education, and an extremely low standard of comfort, it is no wonder that the Indian factory worker was inefficient. The low wage, then, was no advantage to Indian industry.

With dear capital and inefficient labour, Indian industry was handicapped in two important ways. As to the resources of the country, on which, after all, its industrial development mainly depends, they are plentiful in many directions. For example, in the production of raw agricultural produce, India possesses both variety and a large supply. Of certain products India possesses almost a monopoly. But there are many deficiencies. To begin with, it must be observed that the general ignorance as regards India's resources was remarkable until very recent times. Thus the fact that there were many deposits of iron in India may have been known, but there was complete ignorance as to their extent, their commercial possibility and sometimes even their exact location.²

¹ *Report of the Indian Industrial Commission.* Appendix L : 'Industrial Development and Public Health,' by Major F. N. White.

² It was merely an accidental reference to certain old geological survey records that ultimately established the site of the Tata Iron & Steel Co.'s Works. Lovat Fraser, *Iron and Steel in India*.

One of the primary necessities for the industrial development of a country is an abundant supply of fuel for generating power. The most important source of this is coal. Coal, though not abundant, is available in fairly large quantities in India, but all the important fields are concentrated within a small area, and a large part of the country,—especially Madras Presidency—is unable to depend on these supplies to any considerable extent. The slowness of the growth of industries before the twentieth century may largely be attributed to this. For it was only after the early nineties, when an extensive railway system had already been built in India, that the coal industry could expand. The high railway freights on the carriage of coal have also to be considered. Again only the Bengal coal is suitable for the production of good metallurgical coke. Oil as a fuel for generating power can only be used profitably in small engines. Large hopes are at present founded on the future use of hydro-electric power in India. The chief difficulty in the way of developing this is the seasonal rainfall. For this makes the construction of very large storage works necessary. The hydrographic survey, undertaken on the recommendation of the Industrial Commissioners, shows that the possibilities of generating a large volume of electric power are confined to the Eastern and the Western Ghats. Even here the capital outlay will have to be very large.¹ To this difficulty of obtaining cheap power must be attributed a large part of the slowness in the growth of industries.

Equally important was the lack of workings in metals, especially iron and steel. The production of iron and steel is perhaps the most important individual industry in modern times. On it the whole fabric of industrial growth rests. The handicap without it is tremendous. Railways were built in India by imported materials. The machinery for the textile industries was also imported. It was the same with small motors and small mills ;

¹ *Industrial Handbook*, issued by the Indian Munitions Board :
"Hydro-electric Power in India," by J. W. Meares. 1919.

almost every mechanical appliance used in the country, down to the many simple agricultural implements used on the plantations, had to be imported. This naturally retarded in a great measure the introduction into the country of the use of these appliances. Not only this, but it weighed against the Indian industries in their competition with other countries. Schmoller says that the summit and centre of industrial development in the previous stage of industrial evolution was then in the finer textiles manufactures.¹ India, here, was undoubtedly supreme and she had reached the highest point of development long before any other country. But the present stage in development is based on coal and iron; and to the late development and the awkward situation of the coal industry, and the almost entire absence, till a very recent date, of the iron industry, must be attributed in a very large degree the present lack of industries in India.

It has often been said that the early development and expansion of railways in India hindered the growth of industries. In short they laid the country too open to foreign competition and thus repressed the growth of indigenous industries. This is a mere conjecture and can hardly be adequately proved. Indeed, it is as likely that, in the case of a late expansion of railways, the old industrial forms in India would have survived longer and the growth of modern industry would have been even slower. It is, perhaps, not so much the expansion of railways, as the railway policy, that is to be blamed. As pointed out in a previous chapter, this certainly did not give as much attention, as should have been expected from it, to industrial development.

There were a few other factors. One was the lack of the facilities for technical education in India. India had therefore to depend upon imported experts. Industries in most other countries have also been started with the help of foreign experts; but the peculiarity in the case

¹ Gustav Schmoller, *The Mercantile System*, translated by W. J. Ashley. 1896.

of India was that, largely on account of her peculiar political position, these imported experts were not replaced, in due course, by native experts. The stream of these imports was carefully continued. Another reason was the indifference of the Government to industrial development. The policy of *laissez faire* was followed entirely till the beginning of the twentieth century. Since the beginning of the century some provincial Governments have begun to take an active interest in the matter, but the veto of Lord Morley on the activities of the Madras Department of Industries showed that *laissez faire* was dying hard.

When all these obstacles are taken into account the slowness of this process is largely explained. India could only develop industries, in which it had some very strong advantages to counteract all these disadvantages as regards capital, labour and natural resources. The jute industry was placed in a very favourable position by its proximity to the only part of the world where jute was extensively grown. Again, it was a European industry. European industries did not suffer as much from the lack of capital as Indian concerns. India had also a great advantage in the coarser branches of the cotton industry. The short staple cotton of India was peculiarly suited for the production of coarse yarn. The home market was also wide and capable of further extension.

This question of markets is becoming an increasingly important matter. Indian industry depends largely on the foreign markets, but the field of expansion in this direction seems to be limited. In the development of the factory industry other countries have had a long start. It is only in a few cases like the jute industry that Indian industry can depend on a stable foreign demand; but, as the history of the yarn trade with China shows, India in the future will have to depend more and more on the home demand. This problem of developing the home demand has not been, as yet, properly tackled. The obvious lines that an industrial development will take have always been held to be, (i) supplanting foreign imports

of manufactures into the country ; (ii) capturing the market catered for by the village artisan. The mere fact that a country imports some manufactured goods in no way indicates the possibility of that country developing those manufactures, but in certain industries India is expected to make good progress in ousting the foreigner. For capturing the village market either of two things must happen, (i) the standard of living of the village population must rise, or (ii) the manufacturers must be able to produce goods very cheaply. A third possible line that industrial development might take, is the further working up of agricultural products before they are exported out of the country.

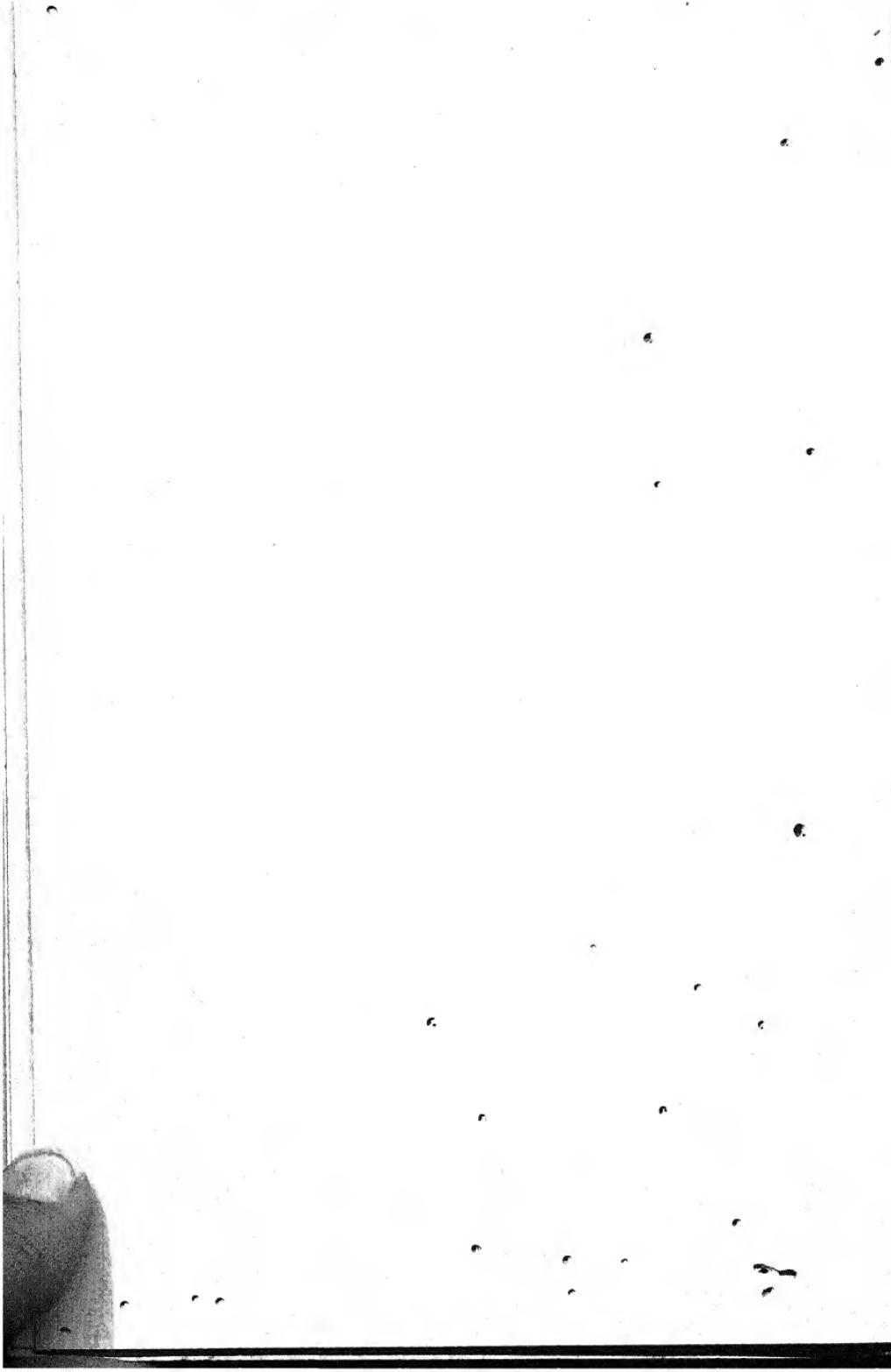
Lastly, we must point out that the industrial development to be real must be all-sided and that it must go hand in hand with the improvement of agriculture. Sir Thomas Holland has pointed out, in another connection, the value of by-products in modern industry. A great obstacle in the progress of oil-crushing and flour industries in India is the lack of a suitable home market for oil-cake and bran.

The various obstacles that hampered the rapid growth of industries in India are being slowly removed. Recently an industrial bank has been started ; there are schemes afloat for the introduction of a compulsory primary education, and the better training of labour ; questions of sanitation, of housing conditions, are being seriously tackled. There is now a more widespread knowledge of India's resources, and a larger desire among the educated classes for taking up industrial pursuits ; railway policy seems to be about to undergo a radical change and the attitude of the Government is now definitely sympathetic. All this points to a steady industrial development in the future. We must not, however, be too sanguine. India, though it may have increased its capital resources during the last two decades, is still a very poor country ; the masses are still illiterate and the training of the huge labouring class of a vast country must take a considerable time. The problem of power has not been satisfactorily solved ;

the iron industry is yet too small and it is turning out only the simplest forms of manufactured products.

Everything points to the fact that India has entered a period of steady industrial development, but, in the near future at least, the process must inevitably be slow. In the meanwhile the country is not reaping any material advantage from the lateness of its industrial evolution. No doubt we had a Factory Law in an earlier stage of the evolution than most other countries, but this did not and does not prevent effectively all the forms of evils which are supposed to be a necessary corollary of the factory. The Census Report of 1921 says that Bombay is very much more overcrowded than London and Karachi a good deal worse than Bombay. The condition of the factory workers, in general, was, in the first decade of this century, as bad as could be expected and their entire want of organization was rendering exploitation of their labour easy. At the same time the tale of the hand-loom weaver's miserable condition reads as if the description was applied to the English weavers at the beginning of the nineteenth century, and not to the Indian weavers at the end of that century. In short, the initial stages that India has passed through have entailed almost as much suffering on the Indian people as those of any other country in a corresponding state. The example of other countries does not help much, simply because there has not yet been found, in any country, a radical remedy for the manifold evils of this latest phase of industrial organization.

There are, however, two remedies which help to alleviate the sufferings of the people. These are education and organization. To educate the workers and to help them to organize themselves is, then, the paramount duty of the educated classes of the country; and it is fervently to be hoped that these classes in India will awaken to their sense of responsibility in the matter before the industrial development of the country proceeds much further.



APPENDIX A

INDUSTRIAL BANKING IN INDIA

THERE were in India in 1914 three kinds of banks.
(i) The Presidency banks ; (ii) the Exchange banks ;
(iii) the Indian joint-stock banks.

Of these, the Presidency banks were nearly a century old, but their business was considerably restricted by legislation. They were not allowed to lend money for long periods and, generally speaking, they could not lend on mortgage or upon the security of immovable property. These restrictions made it impossible for them to finance industries and their most important business was financing the movement of the raw agricultural produce to the ports.

The exchange banks, as their name suggests, were chiefly concerned in the exchange business. In most cases their headquarters were outside India. They also did ordinary banking business, but never concerned themselves with industrial finance.

The progress of joint-stock banking in India has been marked by violent ups and downs. Most of these banks were short-lived and the methods on which they conducted their business were not always sound. The number of such banks at any particular time was not very large, but towards the beginning of this century there was an outburst of banking activity in India and many banks—mostly of a very small size—were started. In 1913, however, there was a severe check to this growth and a very large percentage of banks that had been started during the previous decade failed. These Indian joint-stock banks did, in certain cases, give financial support to float industrial concerns, but in most instances such support was given without any enquiry and without adequate guarantees. Often, also, the private interests of the directors dictated the nature of such

assistance. The Indian joint-stock banks were in 1914 few in number and the amount of business transacted by them was very small, and, worst of all, they did not themselves rest on a sound basis.

There was almost no financial assistance to be had in floating industrial enterprises, and it was only in the case of firms with a well-established reputation that capital was forthcoming for a joint-stock company. Only in the Presidency towns could a few reputed firms raise money for a new enterprise; almost everywhere else industries had to be started with the necessarily limited resources of the *entrepreneur* and his friends.

APPENDIX B

A NOTE ON A WEEKLY MARKET¹

THE importance of a fair was considerable, even in the old Indian economy, and it grew with the construction of good roads. The following account of a weekly market in a district of the Central Provinces just after road-building had vigorously begun will illustrate some points discussed in chapter XII.

‘An important article in the trade in Chinmoor which finds its way to the weekly fair . . . is the manufacture of coarse cloth, which is entirely in the hands of “Dhers”.² . . . The cloth is coarse and strong and is in great favour among the Koonbee cultivators of Berar . . . whom the comparatively flimsy but smart-looking English-made cloth does not suit. . . . That the trade has not been much affected by the high prices of raw cotton is probably accounted for by the fact that the price of cloth, if it has not risen quite in proportion to the increase in the price of the raw material, has yet risen considerably. It is bought in larger quantities than ever by the prosperous Koonbees.’

Notes were taken by Mr. Rivett-Carnac of the stalls held by different traders. Of a total of 1,404 stalls the most important were:—

521 Cloth (110 ‘Koshtees’ weavers of fine native cloth: 350 ‘Dhers’ selling coarse cloth of their own manufacture).

139 Provisions (75 molasses, ‘gur,’ 30 salt, 34 fish).
160 Vegetable sellers.

¹ Extracts and figures taken from the description of this fair by Mr. Rivett-Carnac. *Report of the Cotton Department for the Year 1867-68*, pp. 28-31.

² Not a proper weaver caste but a low caste of village menials, corresponding to the ‘Mahar’ of the Bombay Deccan.

96 Grass sellers.

75 Sellers of iron (tyres for cart wheels, plough-shares, axes, etc., in large quantities).

70 Oil and oil-cake sellers.

65 'Pansarees' or grocers.

There were only thirty grain stalls, but there were also twenty-five cart-loads of raw cotton 'from which Dhers who may have been successful in selling their cloth supply themselves with next week's work of spinning and weaving.' It should be noted that of the 350 coarse weavers only forty-four were regular traders. 'The remainder were of a poorer class, who brought small bundles of cloth on their back and whose sales were small.' The influence of the constitution of the village community is apparent. There are seventy-five sellers of iron in large quantities; these were the traders who distributed the supply of iron for cart-wheels and plough-shares throughout the country; there were similarly fifteen stalls of carpenters with stores of un-worked wood for carts; there were only fourteen stalls of shoe or leather sellers and only three of sellers of earthen pots.

Mr. Rivett-Carnac observes with regard to the popularity of country cloth, 'this it must be remembered is but one of the many places to which the peasantry flock for the cloth made by the "Dhers".'

INDEX

Ackland, 63.
Adilshahi, 8.
Administration, centralization of, 138.
Agra, 5, 6, 20, 26, 40, 139, 162.
Agricultural Department, 78, 109, 110, 112.
Agricultural Produce, demand for, 71-72.
export of, 70-71.
Agriculture, commercialization of, 175-178.
improvement of, 74 sqq., 109 sqq.
introduction of machinery in, 111-112, 186.
see Crops, Cultivation, Famines, Land.
Agri-horticultural Societies, 77.
Ahmedabad, 37, 40, 85, 91, 97, 135, 147, 169, 170, 172, 194.
Ahmednagar, 8, 32.
Allahabad, 7, 148, 171.
American Civil War, 15, 17, 18, 19.
Amritsar, 38, 165, 212.
Anicut, 153.
Aniline Dyes, 38, 195, 196.
Arts, attempts at revival of, 48, 49.
Assam, 10, 55, 56, 57, 61, 88, 168.

Bajra, 108.
Bakewell, Robert, 76.
Bandanas, 37.
Banking, 220-221, 229, 230.
Bannerji, 206.
Barakar Works, 129.
Bareilly, 171.
Baroda, 171.
Bauris, 98.

Beet Sugar, imports of, 133, 134.
Belgaum, 148.
Bellary, 19.
Benares, 7, 20, 37, 39, 171.
Bengal, 3, 8, 10, 27, 36, 48, 53, 54, 57, 61, 63, 64, 69, 73, 86, 87, 92, 93, 94, 96, 97, 98, 101, 102, 105, 107, 108, 123, 133, 135, 138, 141, 145, 158, 159, 166, 197, 199, 219.
—East, 165, 168, 171, 199.
—Lower, 164, 177.
Bengal Chamber of Commerce, 96.
Berar, 70, 72, 74, 99, 102, 147, 168, 177.
Berhampur, 210.
Betul, 103.
Betwa Canals, 153.
Bhavnagar House, at Delhi Exhibition, 48.
Bhor Ghat, 20, 22.
Bidri work, 39.
Bihar, 27, 54, 101, 105, 166, 172.
Bijapur, 8.
Birdwood, Sir George, 5, 41, 76.
Blacksmith, village, 190, 191-192.
Blanqui, M., 36.
Bodh Gaya, 7.
Bombay City, 20, 21, 22, 31, 60, 61, 62, 64, 77, 84, 85, 88, 91, 95, 96, 97, 118, 135, 139, 142, 143, 144, 147, 148, 158, 166, 169, 194, 212, 227.
Bombay Deccan, 3, 97, 154, 157.
Bombay Presidency, 17, 19, 27, 29, 30, 32, 39, 61, 62, 65, 85, 91, 93, 94, 96, 101, 102, 104, 105, 112, 135, 159, 171, 179, 198, 201.

Botanical Gardens, 77.
 Bourgeoisie, creation of a, in India, 45-46.
 Brahmins, 10.
 Brahmaputra Valley, 88.
 Brass and Copperware industry, organization of, 210-211.
 Brick and Tile industry, 91.
 Bristol, 172.
 British Rule, establishment of, 1, 2, 15.
 effect on handicrafts of, 43 sqq.
 Bucher, C., 204.
 Buck, Sir E., 79.
 Bundelkhand, 154, 181.
 Burma, 13, 87, 102, 107, 126, 135, 151, 166, 169, 177.
 —Lower, 99.
 —Upper, 105, 111, 126, 164, 169.

 Calcutta, 57, 64, 77, 92, 96, 97, 122, 139, 141, 147, 166, 168, 169, 172.
 Calicoes, 36.
 Canals, 145, 152, 153.
 Canal Colonies, 153, 154.
 Capital, accumulation of, 219.
 competition of agriculture and trade with industry for, 219-221.
 Carey, Dr., 77.
 Carnatic, 28, 148.
 Carpenter, village, 190, 191, 192, 193.
 Carpet industry, organization of, 212.
 Carts, 5.
 Cattle, Gujarat, 103.
 importance to the cultivator of, 28, 30.
 efforts at improvement of, 78.
 Cawnpore, 139, 142, 148, 158, 164, 170, 194.
 Census results, accuracy of, 159.
 Central India, 8, 18, 102, 164.

Central Provinces, 5, 17, 19, 50, 62, 65, 71, 98, 101, 102, 103, 104, 105, 112, 127, 151, 166, 167, 171, 181, 194, 197, 199, 231.
 Ceylon, 77, 89, 132, 185
 Chamar, 194.
 Chatterton, Sir Alfred, 198.
 Chenab Colony, 153.
 Chhattisgarh, 71, 148.
 China, exports of raw cotton to, 16.
 yarn market, 84, 118, 119, 120.
 Chinmoor, 231.
 Chintzes, 37.
 Choppas, 37.
 Chota Nagpur, 50, 160.
 Chunderee, 37.
 Clapham, Dr., 158.
 Clive, Lord, 158.
 Cloth, country, popularity of, 232.
 Coal, consumption by railways of, 124, 125.
 exports of, 88, 124, 125.
 imports of, 65, 88, 124, 125.
 see Power, Railways.
 Coal Mines, 64, 65, 87, 123-126.
 labour in, 93, 98, 141.
 Cochin, 29.
 Coffee, exports of, 59, 89, 131.
 Coffee Plantations, 58-59, 89, 130-131.
 labour on, 59.
 Coimbatore, 74, 208.
 Cooly Weavers, 208.
 Co-operation, 113, 115.
 Co-operative Credit Societies, 113-115.
 Coorg, 59, 89.
 Coraks, 36, 37.
 Cornish, Dr., 29.
 Cotton Hand-loom industry, 36-37, 196 sqq.
 organization of, 205 sqq.
 see Handicrafts, Weavers.
 Cotton Manufactures, 60-62, 83-85, 117 sqq.
 —Gins and Presses, 62, 90, 135.

- Looms, 62, 84, 85, 119, 120.
- Spindles, 62, 84, 85, 119, 120.
- see Factory, Industry, Labour.
- Cotton, Raw, area under, 15, 19, 108.
 - cultivation of, 15, 16, 19, 70.
 - export of, 15, 16, 17, 18.
 - improvement in, 77, 78, 81, 82, 110-111.
 - internal trade in, 69.
 - organization of markets of, 177.
- production in America of, 16.
 - rise in price of, 17.
- Cotton, Sir Arthur, 153.
- Courts, connection with urban industry of, 7, 8, 9, 10.
 - effect on handicrafts of disappearance, 42-43.
- Crimean War, 63.
- Crops, localization of, 73, 74.
 - nature of crops grown, 73, 106-109.
 - see Agriculture.
- Crossthwaite, Capt., 114.
- Cultivation, area under, 73, 106.
 - effects of irrigation on nature of, 73, 157.
 - standard of, 74, 75.
- Durzon, Lord, 110.
- Cutch, 39, 46.
- Cuttack, 153.
- Dacca, 70, 158, 165, 168.
- Dalhousie, Lord, 20, 21, 145, 147.
- Damascening industry, 39, 46.
- Damuda, 64.
- Darjeeling, 88.
- Deccan, 6, 8, 33, 74, 91, 101, 166, 178, 180.
 - see Bombay Deccan.
- Deccan Agriculturists' Relief Act, 34, 179.
- Delhi, 20, 26, 139, 148, 162, 167, 170.
- De Susa, Charles, 66.
- Devagiri, 8.
- Dharwar, 78, 148.
- Dhers, 201, 231, 232.
- Dhoties, 37.
- Dhulia, 6.
- Dopattas, 37.
- Dufferin, Lord, 1.
- Dundee, 63, 93.
- Dupernex, Mr., 113.
- Dyer, 190, 195-196.
- East India Company, 4, 15, 21, 22, 36, 52, 53, 55, 62, 77, 153.
- East Indian Railway, 64.
- Eden, Sir Ashley, 96.
- Edgar, 56.
- Ellichpur, 168.
- Engineering Workshops, 90, 135.
- Enthoven, 198.
- Epidemics, effect on town growth of, 166.
- European Officials, demand for artistic wares from, 44-46.
- European Manufacturers, competition with handicrafts of, 14, 47-49.
- European Tourists, demand for artistic wares from, 44-46.
- Exchange Banks, 229.
- Exhibition, Delhi, 48.
- Factory Industry, beginnings of, 60.
 - extent of, 136, 137.
 - hours worked in, 94-95, 138-140.
 - one sided development of, 137.
 - sanitation and ventilation, 96-97, 222.
- Factory Legislation, 92-94, 137-138.
 - provisions ineffective, 138.
 - see Labour.

Factory System, in hand-loom industry, 209-210.
 in urban industry, 211, 212, 213.

Fairs, 231, 232.

Famines, 26-28, 71, 99-100, 102-103, 105.
 administration of relief in times of famine, 27, 28, 99, 100, 103, 105.
 change in the nature of, 24, 25, 26.
 effect on agricultural improvement, 30, 104, 105.
 effect on industries, 117-118.
 effect on population, 28, 30.
 effect on urban growth, 162-163.
 effect on village artisans, 202.
 lack of fodder in times of famine, 26, 28, 103, 104.
 lessening intensity of, 174-175.

Francis, 199.

Farms, experimental, 78, 79.

Fawcett, 196.

Ferozpur, 167.

Feudatory States, 42, 43, 45, 146.

Field Embankments, 155, 156.

Fisheries Department, 112.

Fodder crops, 109.

Foley, B., 141.

Food-Grains, area under, 73, 74, 106-108.
 export of, 107, 108.
 prices of, 6, 24, 71, 106.

Foundries, 90, 135.

Fragmentation of land, 182-184.

Franco-German War, 31, 38, 61, 66, 70.

French traders, control of shawl industry by, 38.

Ganges, 4, 152, 153, 154.

Ganges Canals, 152, 153.

Ganjam, 26.

Gaya, 7, 171.

Geddes, Prof., 172.

Ghats, 223.

Giridih Coal-fields, 141.

Glass industry, 50, 51.

Godaveri, 153.

Gokhale, G. K., 149.

Golconda, 8.

Gold-mining, 128.

Government of India, 93, 108, 222, 225.
 agricultural policy, 75 sqq., 109-110.
 efforts to increase cotton cultivation, 17.
 industrial policy, 225.
 state of finances, 31.
 transfer to the crown, 15.

Graham Clarke, 84, 120.

G. I. P. Railway, 65.

Ground-nut, 108, 111.

Guilds, constitution of, 41.
 decay of, 46.

Gujerat, 6, 74, 103, 104, 139, 147, 151, 160, 212, 220.

Gur, competition of imported sugar with, 133.
 internal trade in, 69.

Handicrafts, 36 sqq.
 attempts at revival of, 48-49.
 decline of, 41 sqq.
 division of labour in, 39-40.
 effect of decay on towns, 164-166.
 localization of, 40.
 organization of, 41.
see Courts, Guilds, Industry, Towns.

Havell, E. B., 48.

Henvey, F., 24.

Hides and skins, tanned, export trade in, 66, 67, 90, 134.

Hoey, 9, 42.

Holland, Sir Thomas, 129, 226.

Hooghly, 153, 172.

Housing, effect of bad housing on urban growth, 166.
 of labour in cities, 140, 141, 144.

Howrah, 141.
 Hubli, 148, 171.
 Hyderabad, 39.
 Hydro-electric power, possibilities of, 223.

Indigo, cultivation of, 52-55, 109, 130.
 abuses of the system of cultivation, 53-55.
 —industry, beginnings and growth, 52, 89-90.
 decline of, 130.
 —synthetic, 130.

Indore, 171.

Indus, 4, 154.

Industry, absence of localisation of, 13.
 artisan system in, 205 sqq.
 connection with urban growth, 162.
 domestic or commission system in, 208 sqq.
 European enterprise in, 59.
 old-established industry non-progressive, 216.
 stages in the progress of, 216.
 two-fold division of, 49-51.
 —Rural, condition of, 189-191, 200-203.
 —Urban, changes in organisation of, 204-205.
 see Courts, Handicrafts, Factory, Labour, Towns, Village.

Industrial Banking, 229-230.
 see Banking.

Industrial Census, results of, 136-137.

Industrial Progress, future outlook of, 226-227.
 indexes to, 217.
 necessity of all-sided, 226.
 obstacles to, 219 sqq.
 present position, 216-219.

Inheritance, Hindu law of, 183.

Inundation Canals, 152, 154.

Irawady, 164.

Iron and Steel Industry, 128, 129, 223, 224.

Iron-smelting, 50-51.

Irrigation, 73, 145, 152 sqq.
 economic effects of, 156-157.
 limits to extension of, 155.

Major and Minor works, 154.
 private works, 155, 156.
 protective and productive works, 154.

protection against famines afforded by, 152, 153.

State works, 152-155.

waterlogging due to, 156.

Jalpaiguri, 88.

Jamshedpur, 162, 172.

Japan, 84, 85, 120.

Java, 133.

Jawar, 108.

Jessore, 133.

Joint-stock Banks, 229, 230.
 see Banking.

Jones, 82.

Jubbulpore, 94, 148.

Jumna, 101.

Jumna Canals, 152, 153.

Jute Hand-loom industry, 63.
 —Manufactures, 62-64, 85-86, 122-123, 225.
 —Pressing, 64, 90.
 —Raw, area under, 103.
 spread in cultivation of, 15.

Kadur, 58

Kaira, 6.

Kale, Prof., 217.

Kangra, 58.

Karachi, 126, 148, 151, 169, 227.

Kashbarbari, 65.

Kashmir, 40, 43.
 shawl industry, 38, 44.

Kathiawar, 43.

Kaveri, 153.

Khandesh, 147, 177.

gins, 95, 97, 139.

Kincob, 40.

Kipling, 46.

Kistna, 153.
Koftgari, 5, 44.
 Kolar Mines, 87, 128.
 Koleroon, 153.
 Konkan, 79, 91, 143.
 Kotli, 39.
 Krishnagar, 37.
 Kumar Dakhineswar Mallia, 89.
 Kumarswami, A., 48.

Labour, Agricultural, material condition of, 71, 100, 101, 102.
 scarcity of, 184-185.
 wages of, 175.
 —Casual, creation of a class of, 21.
 composition of, 22.
 —Landless, connection with urban growth, 163.
 creation of, 182, 191, 202.
 —Factory, condition of, 94 sqq.
 efficiency of, 221-222.
 illiteracy of, 221-222.
 low standard of living of, 221-222.
 regulation of the hours of, 139-140.
 recruitment of, 91-92.
 scarcity of, 140 sqq.
 stages in severance from land of, 142-144.
 see Coal Mines, Coffee Plantations, Factory, Housing, Industry, Tea Plantations, Wages.

Lac Manufactories, 90.
 Lahore, 39, 170.
 Lancashire, 17, 84, 120, 121, 164.
 Land, pressure on, 49, 185, 186, 218.
 transfer of, economic effects of, 181-182.
 effect of giving absolute rights of, 32-34, 178-179.
 effects of legal restriction on, 179-181.

extent of movement towards, 181.
 restriction by legislation on, 34, 179, 181.
 restrictions under pre-British rule, 32.
 Landholders, material condition of, 100, 101, 102.
 Landlord, village, 68, 69.
 Land Revenue
 effects of initial assessments, 3.
 introduction of cash payments of, 23.
 Land Tenures, 68, 69.
 Leather work, ornamental, 46.
 Leather-worker, village, 188, 190.
 Levasseur's proposition, 161.
 Linseed, 108.
 London, 158, 227.
 Lucknow, 9, 37, 158, 164, 171.
 Ludhiana, 38.

Macaulay, Lord, 53.
 Machinery, extended use of, 135, 136.
 Maclagan, E. D., 44, 113.
 Madiga, 194, 195.
 Madras City, 66, 77, 92, 140, 147, 158.
 Madras Presidency, 3, 19, 20, 23, 26, 27, 29, 30, 66, 71, 89, 90, 101, 102, 105, 110, 112, 127, 134, 135, 138, 145, 154, 185, 194, 198, 213, 223.
 Madura, 37, 170, 196.
 Maher, 188, 189, 194.
 Mahim, 74.
 Malabar, 89, 91, 112.
 Maldah, 37, 164.
 Manchester Chamber of Commerce, spinning inquiry, 84, 85.
 Mandalay, 165.
 Mangalore, 91.
 Manganese industry, 127-128.
 Manjarabad, 59.
 Marathwara, 177.

Markets, problem of finding, 225-226.
 for agricultural produce, organization of, 177.

Marten, 194.

Marwari, 32, 33, 34.

Mauritius, 133.

Meade King, 96.

Meerut, 171.

Mehta, P. N., 108, 207, 209.

Mehta, Sir B. D., 140, 221.

Metal handicrafts, 39.

Metallurgical industries, lack of, 129, 223, 224.

Mica, 128.

Minerals, one-sided development of, 129, 130.
 production of, 123, 130.

Mirzapur, 8, 70, 164, 212.

Mohpani, 65.

Money-lenders, power over peasantry of, 32-33.
 economic position of, 113.

Morley, Lord, 225.

Mukherjee, T. N., 37.

Multan, 170.

Murshidabad, 37, 158, 165.

Muslin, 14, 37.

Mustard seed, 108.

Mutha, 74, 157.

Mutra, 171.

Myingyan, 164.

Mylne and Thompson, 79.

Mysore, 27, 29, 50, 51, 89, 128.

Nagpur, 70, 147, 171.

Nair, Dr., 139, 140.

Narayanganj, 171.

Narmada Valley, 164.

Nasik, 39.

Native States, *see* Feudatory States.

Nicholson, Sir Frederick, 112, 113.

Nilgiri, 58, 88, 89.

Nira, 74, 157.

Nizam's Dominions, 27, 43.

North-Western Provinces, 6, 25, 26, 27, 66, 69, 88, 92, 98, 101, 102, 113, 148, 174.
see United Provinces.

Northbrook, Lord, 31.

Norwich, 172.

Nowgong, 57.

O'Connor, J. E., 63, 89.

O'Dwyer, 179.

Oilman, village, 195.

Oilseeds, area under, 108.

Opium, 108, 109.

Orissa, 71, 92.

Oudh, 27, 102, 164.
 Nawabs of, 9, 42.

Paisley, 39.

Paithan, 8, 166.

Paithani, 40.

Palampore industry, 37.

Paoni, 37.

Paper-making, 50, 51.

Papier-maché, 40.

Patna, 171.

Peasantry, economic condition of, 3, 18, 19, 35, 71, 100-102.
 indebtedness of, 32-35, 112, 113, 178-181.
see Agriculture; Land, transfer of; Subdivision and fragmentation of Land.

Periyar irrigation scheme, 170.

Permanent Settlement, 3.

Peshawar, 20.

Petroleum industry, 126-127.

Phulkari work, 40.

Piece-goods, export of, 121, 122.

Plague, 118.

Plantations, nature of, 52, 132, 133.

Poona, 20, 22, 32, 37, 39.

Population, check to, on account of famines, 29-30.
 growth of, 218.
 —Urban, 161; proportion of, to the total, 7, 158, 159, 160.
see Land, pressure on.

Potter, village, 188, 190, 193, 194.
 Pottery, artistic, 45.
 industry, 193.
 Power, problem of, 223.
 Presidency Banks, 221, 229.
 see Banking.
 Prices, course of, 23-24.
 fluctuations in, 6.
 Public Works, growth in construction of, 21-23.
 Public Works Department, 20, 22, 91, 145.
 Punjab, 38, 39, 46, 58, 64, 69, 73, 88, 102, 105, 106, 113, 138, 148, 151, 153, 154, 156, 157, 179, 180, 181, 199.
 Punjab Land Alienation Act, 179, 180.
 Puri, 7.

Raichur, 148.
 Railways, dependence of the coal industry on, 64, 65, 87, 152.
 extent of, 147.
 internal trade and, 151, 152.
 irrigation and, 145.
 management of, 150, 151.
 protection against, famines afforded by, 148, 149.
 see Roads.
 Railway Construction, beginnings and growth of, 20-21, 146-148.
 effect on urban growth of, 161.
 lines of development of, 147-148.
 policy as regards, 146-147.
 rapid construction depreciated, 149.
 reasons for rapid construction, 149.
 results of, 21, 151, 152.
 Railway Policy, causes affecting, 149, 150.
 effect on industries of, 150, 151.
 Rajputana, 6, 25, 26, 39, 43, 162, 171, 174, 179.

Ranade, Mr. Justice, 91, 112, 217.
 Rangoon, 92, 169, 177.
 Raniganj, 64, 129, 148.
 Rape seed, 108.
 Rawalpindi, 170.
 Reh, 156.
 Rice, area under, 107.
 exports of, 107.
 mills, 90, 135.
 organization of markets of, 177.
 Riots, of peasants, in the Deccan, 32, 33, 34.
 Rivett-Carnac, 18, 62, 70, 231, 232.
 Roads, condition in first half of 19th century, 4-5.
 construction and extension of, 20, 152.
 Robertson, T., 150.
 Rowntree, R. Seebohm, 184, 186.
 Royle, Dr. J. F., 16, 46, 70.
 Russo-Japanese War, 127.
 Ryatwari village, 68, 69.

Salem, 6.
 Salt industry, 128.
 Saltpetre industry, 50-51, 128.
 Santipur, 165.
 Saugor, 164.
 Schmoller, Gustav, 224.
 Serampore, 63.
 Sesamum, 108.
 Shawl industry, 38-39.
 Shipping industry, 14.
 Sholapur, 142, 147.
 Sialkot, 39.
 Silk, Bengal industry, 14.
 cloth industry, 37, 45.
 organization of cloth industry, 210.
 Sind, 39, 46, 152, 154.
 Sleeman, 219.
 Sonthals, 98, 142.
 Steel, Mysore, 51.
 see Iron and Steel Industry.

Subdivision and fragmentation of land, 182-185, 219.
 Suez Canal, 65, 70.
 Sugar, imports of, 133, 134.
 —Industry, decline of, 133, 134.
 unstable basis of, 134.
 Sugar-Cane, shrinking of area under, 109, 133.
 specialized crop, 70.
 Sugar Press, Mylne and Thompson's, 79.
 Sutlej, 153.

Takavi allowances, 80-81, 156.
 Tanjore, 10, 39, 158.
 Tanks, 155, 156.
 Tanner, village, 194, 195.
 Tanneries, establishment of, 135.
 Tanning, Madras industry, 66-67, 90.
 decline of, 134-135.
 organization of, 67.
 Tata and Sons, 129, 162.
 Tea, competition with Chinese, of Indian, 132.
 exports of, 132.
 Tea Plantations, 55-58, 88-89, 132.
 beginnings of, 55.
 grants of land for, 56.
 conditions of labour on, 57, 58.
 methods of recruitment of labour on, 57-58, 89.
 speculation in, 56, 57.
 Technical education, lack of, 224.
 Textile industries, effects of foreign competition on, 47.
 Thana, 21.
 Timber Mills, 90, 135.
 Towns, causes making for a decline of, 163 sqq.
 causes making for a growth of, 161-163.
 census definition of, 159.

decaying class of, 171.
 growth of, 158 sqq.
 industrial, 169-170.
 nature and development in the first half of the 19th century, 7-10, 158, 159.
 relative increases in large and small, 167-169.
 trading, 170-171.
 see Population, urban.
 Town Aggregates, 172.
 Trade, changes in methods of, 48, 219.
 concentration of, 167.
 diffusion of, 167.
 extent of internal trade, 5.
 see Markets, Railways.
 Trade routes, changes in, 161, 162, 164.

Umrer, 37.
 United Kingdom Tea Market, 132.
 United Provinces, 104, 105, 133, 138, 141, 143, 153, 156, 171, 198, 211.
 see North-Western Provinces.

Village, constitution of, 68, 69 ; size of, 2, 3.
 Village Artisans, dues and services, 11-13, 69, 187 sqq.
 form the large bulk of the industrial population, 187.
 two-fold division of, 11-12, 187-188.
 see Industry, rural ; Weaver.
 Village Community, character of, 10-13.
 dissolution of, 188-191, 201.
 economic effects of the character of, 12-13.
 influence on the weekly market, 190, 231, 232.
 Vizagapatam, 39.
 Voeckler, Dr., 74, 79, 81.

Wages, rise in wages of un-skilled labour, 22.
agricultural labour, 115.
movement of, to factory work, 97.
ora, 65.
sim, 168.
tson, Dr. J. F., 36, 197.
att, Sir George, 52, 77.
Weaver, hand-loom, 231, 232.
economic condition of, 199-200.
effects of famines on, 202, 203.
tendency towards concentration of, 190, 200.
see Cotton, Industry, Village Artisans.

Wells, 155, 156.
Western Ghats, 28, 30.
Wheat, area under, 107.
export of, 28, 107.
improvement in, 111.
Wire and Tinsel industry, organization of, 211-212.
Woollen Mills, 38.
Workshops, in urban industry 205, 210, 211, 214.
Wynaad, 59.
Yeola, 37, 40.
Zemindars, 3.